Doc Ref. **FP13**
Appl. No. 10/592,265

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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 **:** A61K	A2	**(11) International Publication Number:** WO 96/20689 **(43) International Publication Date:** 11 July 1996 (11.07.96)

(21) International Application Number: PCT/US95/16248

(22) International Filing Date: 13 December 1995 (13.12.95)

(30) Priority Data:
08/364,338 27 December 1994 (27.12.94) US

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(81) Designated States: AU, CA, JP, MX, NZ, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).

Published
Without international search report and to be republished upon receipt of that report.

(54) Title: BORONIC ACID AND ESTER INHIBITORS OF THROMBIN

(57) Abstract

Novel boronic acid and ester and carboxyl-modified amino acid compounds of formula (I): R^1-Z-CHR^1-A, which are inhibitors of trypsin-like enzymes, are disclosed, where R^1, Z, R^2 and A are defined within.

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Title

Boronic Acid and Ester Inhibitors of Thrombin

Cross-reference to Earlier Filed Applications

This application is a continuation-in-part of U.S. Patent Application Serial Number 8/348/029, filed December 1, 1994, which is a continuation-in-part of U.S. Patent Application Serial Number 08/318/029, filed October 4, 1994, which is a continuation-in-part of U.S. Patent Application Serial Number 08/036/377, filed March 24, 1993.

Field of the Invention

This invention relates to the discovery of new boronic acid derivatives which are inhibitors of thrombin and pharmaceutical compositions thereof.

Background of the Invention

Hemostasis is the normal physiological process in which bleeding from an injured blood vessel is arrested. It is a dynamic and complex process in which proteolytic enzymes such as thrombin play a key role. Blood coagulation may occur through either of two cascades of zymogen activations, the extrinsic and intrinsic pathways of the coagulation cascade. Factor VIIa in the extrinsic pathway, and Factor IXa in the intrinsic pathway are important determinants of the activation of factor X to factor Xa, which itself catalyzes the activation of prothrombin to thrombin. The last protease in each pathway is thrombin, which acts to hydrolyze four small peptides (two FpA and two FpB) from each molecule of fibrinogen, thus deprotecting its polymerization sites. Once formed, the linear fibrin polymers may be cross-linked by factor XIIIa, which is itself activated by thrombin. In addition, thrombin is

a potent activator of platelets, upon which it acts at specific receptors. Thrombin activation of platelets leads to aggregation of the cells and secretion of additional factors that further accelerate the creation of a hemostatic plug. Thrombin also potentiates its own production by the activation of factors V and VIII (see Hemker and Beguin in: Jolles, et. al., "Biology and Pathology of Platelet Vessel Wall Interactions," pp. 219-26 (1986), Crawford and Scrutton in: Bloom and Thomas, "Haemostasis and Thrombosis," pp. 47-77, (1987), Bevers, et. al., *Eur. J. Biochem.* **1982**, *122*, 429-36, Mann, *Trends Biochem. Sci.* **1987**, *12*, 229-33).

Thrombosis may be regarded as the pathological condition wherein improper activity of the hemostatic mechanism results in intravascular thrombus formation. Etiological factors such as the presence of atherosclerotic plaque, phlebitis and septicemia may cause thrombosis, leading to impaired blood flow to the effected tissues and possible serious pathological consequences. Thrombosis may be reduced by inhibition of the normal process of blood coagulation by anticoagulants. Anticoagulants act by reducing the amount of thrombin which is generated, or by inhibiting with the proteolytic actions of thrombin.

Currently, two of the most effective classes of drugs in clinical use as anticoagulants are the heparins and the vitamin K antagonists. The heparins are ill-defined mixtures of sulfated polysaccharides that bind to, and thus potentiate the action of antithrombin III. Antithrombin III is a naturally occurring inhibitor of the activated clotting factors IXa, Xa, XIa, thrombin and probably XIIa (see Jaques, *Pharmacol. Rev.* **1980**, *31*, pp. 99-166). The vitamin K antagonists, of which warfarin is the most well-known example, act indirectly by inhibiting the post-ribosomal carboxylations of the vitamin K dependent coagulation factors II, VII, IX and

X (see Hirsch, *Semin. Thromb. Hemostasis* **1986**, *12*, 1-11). While effective therapies for the treatment of thrombosis, heparins and vitamin K antagonists have the unfortunate side effects of bleeding and marked interpatient variability, resulting in a small and unpredictable therapeutic safety margin. The use of direct acting thrombin inhibitors is expected to alleviate these problems.

Anticoagulants are also necessary in the processing of blood for therapeutic or diagnostic purposes or for the production of blood products or fragments, since contact of blood with the surfaces commonly used for blood collection and storage causes activation of coagulation leading to thrombin formation and clot formation.

The coagulation proteases thrombin, factor Xa, factor VIIa, and factor IXa are serine proteases having trypsin-like specificity for the cleavage of sequence-specific Arg-Xxx peptide bonds. As with other serine proteases, the cleavage event begins with an attack of the active site serine on the scissile bond of the substrate, resulting in the formation of a tetrahedral intermediate. This is followed by collapse of the tetrahedral intermediate to form an acyl enzyme and release of the amino terminus of the cleaved sequence. Hydrolysis of the acyl enzyme then releases the carboxy terminus.

A number of naturally occurring thrombin inhibitors have been reported. These include nazumamide A from *Theonella sp.* (see Fusetani, et. al., *Tetrahedron Lett.* **1991**, *32*, 7073-4), cyclotheonamide A from *Theonella sp.* (see Fusetani, et. al., *J. Am. Chem. Soc.* **1990**, *112*, 7053-4), amblyommin from *Amblyomma hebraeum* (see Bonin, et. al., EP 345614), hirudin from *Hirudo medicinalis*, recombinant versions of hirudin and hirudin fragments (see Rigbl and Jackson, EP 352903, Koerwer, WO 9109946,

Meyer, et. al., WO 9108233, Dawson, et. al., WO 9109125, Maraganore, et. al., WO 9102750 and Maraganore, EP 333356).

Synthetic thrombin inhibitors have also been disclosed. Arylsulfonylarginine amides such as (2*R*,4*R*)-4-methyl-1-[N^2-{(3-methyl-1,2,3,4-tetrahydro-8-quinolinyl)sulfonyl}-*L*-arginyl]-2-piperidinecarboxylate have been shown to be effective inhibitors of thrombin (see Okamoto, et. al. *Thromb Res.* **1976**, *8*, 77-82, Ohshiro, et. al., *Blood Vessel* **1983**, *14*, 216-8), as have compounds containing constrained arginine mimics such as (2-naphthylsulfonylglycyl)-4-amidino-phenylalanyl piperidide (see Stuerzebecher, et. al., *Thromb. Res.* **1983**, *29*, 635-42), 1-[2-[5-(dimethylamino)naphth-1-ylsulfonamido]-3-(2-iminohexahydropyrimidin-5-yl)propanoyl]-4-methylpiperidine dihydrochloride (see Ishikawa, JP 88227572 and Ishikawa and Inamura, JP 88227573), *N*-(*trans*-4-amino-methylcyclohexylcarbonyl)-4-*O*-(2-picolyl)-*L*-tyrosine 4-acetanilide dihydrochloride (see Okamoto, et. al., EP 217286) and 4-[(aminoiminomethyl)amino]benzoic acid esters (see Fuji, et. al., DE 3005580, Matsuoka, et. al., *Jpn. J. Pharmacol.* **1989**, *51*, 455-63, and Takeshita, et. al., EP 435235).

Inhibitor design has benefitted from the knowledge of the mechanism of action and of the peptide sequences which are thought to bind in the catalytic site of thrombin, e.g., -Gly-Val-Arg-Gly- of fibrinogen (see Blombäck, et. al., *J. Biol. Chem.*, **1972**, *247*, 1496-512), Ile-Pro-Arg-Ser- of prothrombin (see Magnussen, et. al., in: Reich, et. al., "Proteases and Biological Control," pp. 123-149 (1975)) and -Val-Pro-Arg-Gly- of factor XIII (see Takagi and Doolittle, *Biochemistry* **1974**, *13*, 750-6 and Nakamura, et. al., *Biochem. Biophys. Res. Commun.* **1974**, *58*, 250-256). This class of mechanism-based inhibitors are exemplified by the tripeptide aldehyde *D*-

Phe-Pro-*N*-Me-Arg-H (see Bajusz, et. al., *J. Med. Chem.* **1990**, *33*, 1729-35), the chloromethyl ketone Ac-*D*-Phe-Pro-ArgCH_2Cl (see Kettner and Shaw, *Thromb. Res.* **1979**, *14*, 969-73) and the trifluoromethyl ketone *D*-Phe-Pro-ArgCF_3 (see Kolb, et. al., US 697987).

Kettner and Shenvi (EP 293881, published June 12, 1988), disclose peptide boronic acid inhibitors of trypsin-like proteases of formula (1)

$$R^1\text{-}[(A^3)_q(A^2)_p(A^1)_o]_n\text{-NH-CHR}^2\text{-BY}^1Y^2 \quad (1)$$

wherein Y^1 and Y^2, independently, are hydroxyl or fluoro or, taken together, form a moiety derived from a dihydroxy compound having at least two hydroxy groups separated by at least two connecting atoms in a chain or ring, said chain or ring comprising 1 to about 20 carbon atoms and, optionally, a heteroatom which can be N, S, or O; R^2 is a substituted alkyl selected from the group consisting of $-(CH_2)_z-X$, $-(CH(CH_3)-(CH_2)_2-X$, $-CH_2-CH(CH_3)-CH_2-X$, $-(CH_2)_2-CH(CH_3)-X$ and $-(CH_2)_2-CH(CH_3)_2-X$, where X is $-NH_2$, $-NH-C(NH)-NH_2$ or $-S-C(NH)-NH_2$, and z is 3 to 5; n, o, p and q are, independently, either 0 or 1; A^1, A^2 and A^3 are, independently, amino acids of *L*- or *D*-configuration selected from the group consisting of Ala, Arg, Asn, Asp, Cys, Gln, Glu, Gly, His, Ile, Leu, Lys, Met, Phe, Pro, Ser, Thr, Trp, Tyr and Val; and R^1 is a peptide comprised of 1 to about 20 amino acids, an acyl or a sulfonyl group comprised of 1 to about 20 carbon atoms, H, or an N-terminal protecting group. In this disclosure, Kettner and Shenvi demonstrated that the pinanediol esters of boropeptides are pharmacogolically equivalent to the corresponding boronic acids.

Metternich (EP 0471651 A2) discloses borolysine thrombin inhibitors of formula (2)

$$W\text{-}Y\text{-NR}^4\text{-CHR}^5\text{-BQ}^1Q^2 \quad (2)$$

wherein W is an N-protecting group; Y is a sequence of n amino acids such that the n+1 amino acid peptide Y-Lys or Y-Arg has an affinity for the active site of a trypsin-like protease; where n is an integer of from 1 to 10 and in which at least one amino acid is an unnatural amino acid having a hydrophobic side chain; Q^1 and Q^2 are the same or different and are selected from -OH, $-COR_1$, $-CONR_1R_2$, $-NR_1R_2$ or $-OR_3$ of Q^1 and Q^2 taken together form a diol residue; R_1, R_2 and R_3 which may be the same or different, are C_{1-10}alkyl, C_{6-10}aryl, C_{6-10}aralkyl, or phenyl substituted by up to three groups selected from C_{1-4}alkyl, halogen and C_{1-4}alkoxy; R_4 is hydrogen or C_{1-10}alkyl; R_5 is a group -A-X; wherein A is $-(CH_2)_z-$ in which z is 2, 3, 4 or 5; $-CH(CH_3)-(CH_2)_2-$; $-CH_2-CH(CH_3)-CH_2-$; $-(CH_2)_2-CH(CH_3)-$; $-(CH_2)_2-C(CH_3)_2-$; $CH(CH_3)-(CH_2)_3-$; $-CH_2-CH(CH_3)-(CH_2)_2-$; $-CH_2-CH_2-CH(CH_3)-CH_2-$; $-(CH_2)_3-CH(CH_3)-$; $-(CH_2)_3-C(CH_3)_2$: C_{6-10}aryl C_{6-10}aralkyl and X is $-NH_2$, $-NH-C(NH)-NH_2$, $-S-C(NH)-NH_2$, N_3, $-C_{1-4}$alkoxy, C_{1-4}alkylthio or $Si(CH_3)_3$ or R_4 and R_5 taken together form a trimethylene group and the asymmetric carbon atom may have the D- or L-configuration or represent any mixture of these.

Surprising for their lack of a basic residue at P_1 are tripeptide thrombin inhibitors comprised of 1-aminoboronic and 1-aminophosphonic acid analogs of 3-methoxy-propylglycine (see Claeson, et. al., US 07-245428) and pentylglycine (see Cheng, et. al., "Symposium on Thrombosis and Hemostasis," 1991, Amsterdam, Abstract 2150).

In addition to thrombin inhibition, boropeptides have been disclosed with utility as a treatment for tumors, viral infections and arthritis (US 4963655A and EP 354522A), emphysema (US 4499082A), hypertension (EP 315574A) and as factor VII/VIIa inhibitors (WO 8909612A). Kleemann, et. al. (AU A-24693/88) disclose

renin-inhibiting 1-amino boronic acid derivatives of formula (3)

$A^1\text{-}A^2\text{-}HN\text{-}CHR^2\text{-}BXR^3(YR^4)$ (3)

in which A^1 denotes a radical of formulae (4-8).

$R^1NR^6\text{-}CHR^5\text{-}C{=}O\text{-}$ (4)

$R^1CHR^{12}\text{-}CHR^5\text{-}C{=}O\text{-}$ (5)

$R^1NR^6\text{-}CHR^5\text{-}CHR^7\text{-}CHR^8\text{-}CHR^9\text{-}C{=}O\text{-}$ (6)

$R^1CHR^{12}\text{-}CHR^5\text{-}CHR^7\text{-}CHR^8\text{-}CHR^9\text{-}C{=}O\text{-}$ (7)

$R^{10}\text{-}(CH_2)_n\text{-}CH(CH_2)_mR^{11}\text{-}C{=}O\text{-}$ (8)

Despite the foregoing, more efficacious and specific inhibitors of coagulation proteases are needed as potentially valuable therapeutic agents for the treatment of thrombosis. None of the cited references describe or suggest the new thrombin-inhibiting boronic acid derivatives of the present invention.

Summary of Invention

This invention pertains to novel compounds of formula (I):

$$R^1\text{-}Z\text{-}CHR^2\text{-}A$$
(I)

wherein

A is

a) $-BY^1Y^2$,
b) $-C(=O)CF_3$,
c) $-C(=O)CHF_2$,
d) $-C(=O)CH_2F$,
e) $-C(=O)CH_2Cl$,
f) $-C(=O)OR^3$,
g) $-C(=O)NR^{15}R^{16}$,
h) $-C(=O)R^3$,
i) $-C(=O)COOR^3$,
j) $-C(=O)C(=O)NR^{15}R^{16}$,

k) $-C(=O)C(=O)R^3$,

l) $-C(=O)CY^3Y^4COOR^3$,

m) $-C(=O)CY^3Y^4C(=O)NR^{15}R^{16}$,

n) $-C(=O)CY^3Y^4C(=O)R^3$,

o) $-PO_3H_2$, or

p) -CHO;

Y^1 and Y^2 are independently

a) -OH,

b) -F,

c) $-NR^3R^4$, or

d) C_1-C_8 alkoxy;

Y^1 and Y^2 can be taken together to form:

e) a cyclic boron ester where said chain or ring contains from 2 to 20 carbon atoms and, from 0-3 heteroatoms which can be N, S, or O,

f) a cyclic boron amide where said chain or ring contains from 2 to 20 carbon atoms and, from 0-3 heteroatoms which can be N, S, or O,

g) a cyclic boron amide-ester where said chain or ring contains from 2 to 20 carbon atoms and, from 0-3 heteroatoms which can be N, S, or O;

Y^3 and Y^4 are independently

a) -OH or

b) -F;

Z is

a) $-(CH_2)_mCONR^8-$,

b) $-(CH_2)_mCSNR^8-$,

c) $-(CH_2)_mSO_2NR^8-$,

d) $-(CH_2)_mCO_2-$,

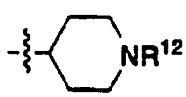
e) $-(CH_2)_mC(S)O-$, or

f) $-(CH_2)_mSO_2O-$;

R^1 is

a) $-(CH_2)_p$-aryl, wherein aryl is phenyl, naphthyl or biphenyl substituted with one, two or three substituents selected from the group consisting of:

halo (F, Cl, Br, I), methylenedioxy, $-R^8$, $-NR^8COR^9$, C_2-C_6-alkenyl, C_2-C_6-alkynyl, $-(CH_2)_w-OR^8$, $-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wCN$, $-(CH_2)_wNC$, $-(CH_2)_wNO_2$, $-(CH_2)_wCF_3$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wNR^8R^9$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCHO$; $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$. $-(CH_2)_wSO_2NH-(C_1-C_5)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH-CO-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH-CO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wNHSO_2$-phenyl, $-(CH_2)_wNHSO_2$-perfluorophenyl, $-(CH_2)_wCN_4H$, $-O(CH_2)_wCN$, $-NH(CH_2)_wCN$, $-S(CH_2)_wCN$, $-(CH_2)_wNH-CO-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-perfluoroalkyl), $-(CH_2)_wNH-CO$-(phenyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-perfluoroalkyl), $-(CH_2)_wNH-CO_2$-(phenyl), $-O(C{=}O)-(C_1-C_5$-alkyl),

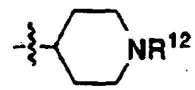


;

b) heteroaryl, wherein heteroaryl is an unsubstituted, monosubstituted or disubstituted:

i) quinolinyl,
ii) isoquinolinyl,
iii) benzopyranyl,
iv) benzothiophenyl,
v) benzofuranyl,
vi) 5,6,7,8-tetrahydroquinolinyl,
vii) 5,6,7,8-tetrahydroisoquinolinyl,

and wherein the substituents are selected from the group consisting of halo (F, Cl, Br, I), -CN, C_1-C_{10}-alkyl, C_3-C_8-cycloalkyl, C_2-C_{10}-alkenyl, C_2-C_{10}-alkynyl, R^8, $-OR^8$, $-NO_2$, $-CF_3$, $-S(O)_rR^7$, $-NR^8R^9$, $-COR^8$, $-CO_2R^8$, $-CONHR^8$, NR^8COR^9, $NR^8CO_2R^9$,



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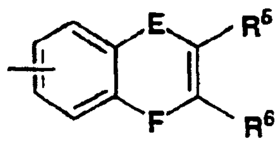
c)



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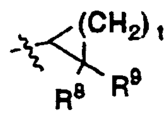

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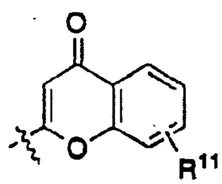
e)



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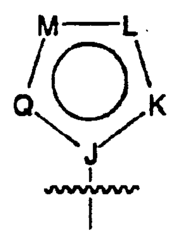
f)



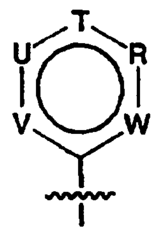
wherein J is N or C and K, L, M and Q are independently selected at each occurrence from the group consisting of N, CR^{13}, S or O, provided that:

i) there may be only one S or O present in the ring at a time;

ii) there may only be 1-2 N present when there is an O or S present;

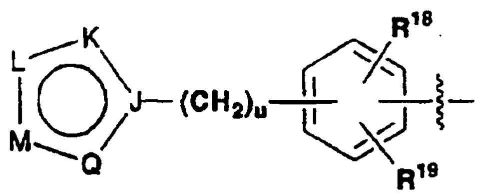
iii) there may be only 1-4 N present;

g)

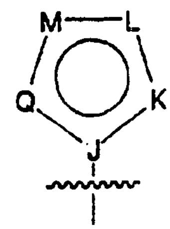


wherein W, R, T, U and V are selected from the group consisting of: CR^{13} or N, provided that there be no less than 1 and no more than 3 N present;

h)

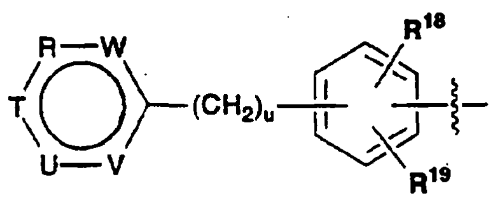


wherein

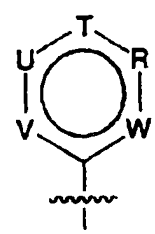


is as defined above;

i)

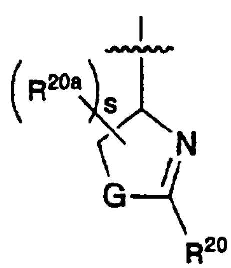


wherein



is as defined above;

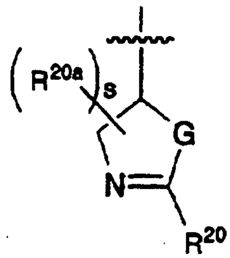
j)



wherein G is O, S, or NP, where P is an amine protecting group selected from the group

consisting of: $-R^3$, $-C(=O)R^3$, $-SO_2R^3$, $-C(=O)OR^3$);

k)



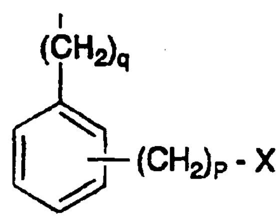
wherein G is O, S, or NP, where P is an amine protecting group selected from the group consisting of: $-R^3$, $-C(=O)R^3$, $-SO_2R^3$, $-C(=O)OR^3$);

R^2 is

a) $-(C_1-C_{12}$ alkyl$)-X$,

b) $-(C_2-C_{12}$ alkenyl$)-X$, or

c)



;

X is

a) halogen (F, Cl, Br, I),

b) -CN,

c) $-NO_2$,

d) $-CF_3$,

e) $-S(O)_rR^{14}$,

f) $-NHR^{14}$

g) $-NHS(O)_rR^{14}$,

h) -NHC(NH)H,

i) -NHC(NH)NHOH,

j) -NHC(NH)NHCN,

k) $-NHC(NH)NHR^{14}$,

l) $-NHC(NH)NHCOR^{14}$,
m) $-C(NH)NHR^{14}$,
n) $-C(NH)NHCOR^{14}$,
o) $-C(O)NHR^{14}$,
p) $-C(O)NHC(O)R^{14}$,
q) $-C(O)OR^{14}$,
r) $-OR^{14}$,
s) $-OC(O)R^{14}$,
t) $-OC(O)OR^{14}$,
u) $-OC(O)NHR^{14}$,
v) $-OC(O)NHC(O)R^{14}$,
w) $-SC(=NH)NHR^{14}$, or
x) $-SC(=NH)NHC(=O)R^{14}$;

R^3 is
a) hydrogen,
b) C_1-C_8 alkyl,
c) -(C_1-C_4 alkyl)-aryl,
d) C_5-C_7 cycloalkyl, or
e) phenyl;

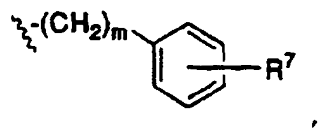
R^4 is
a) hydrogen,
b) C_1-C_8 alkyl,
c) -(C_1-C_4 alkyl)-aryl,
d) C_5-C_7 cycloalkyl,
e) phenyl, or
f) phenylsulfonyl;

R^5 and R^6 are hydrogen or when taken together form a six membered aromatic ring optionally substituted with one, two or three substituents selected from the group consisting of halo (F, Cl, Br, I), -CN, C_1-C_{10}-alkyl, C_3-C_8-cycloalkyl, C_2-C_{10}-alkenyl, C_2-C_{10}-alkynyl, $-OR^8$, $-NO_2$, $-CF_3$, $-S(O)_rR^7$, $-NR^8R^9$, $-COR^8$, $-CO_2R^8$, $-CONR^8R^9$, phenyl, benzyl, phenylethyl;

R^7 is
a) phenyl,

b) C_1-C_8-alkyl,
c) C_1-C_4-alkoxy,
d) -CF_3, or
e) benzyl;

R^8 and R^9 are independently
a) H,
b)



c) C_3-C_7 cycloalkyl, or
d) C_1-C_8-alkyl;

R^{11} is
a) halo (F, Cl, Br, I),
b) -CN,
c) C_1-C_{10}-alkyl,
d) C_3-C_8-cycloalkyl,
e) C_2-C_{10}-alkenyl,
f) C_2-C_{10}-alkynyl,
g) -OR^8,
h) -NO_2,
i) -CF_3,
j) -$S(O)_rR^7$,
k) -NR^8R^9,
l) -COR^9,
m) -CO_2R^8,
n) -$CONR^8R^9$, or
o) H

R^{12} is
H, C_1-C_4 alkyl, phenyl, benzyl, -COR^7, or -$S(O)_rR^7$;

R^{13} is
H, halogen (F, Cl, Br, I), (C_1-C_8)alkyl, (C_1-C_6)-perfluoroalkyl, -$(CH_2)_r$-D, C_3-C_8 cycloalkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, methylenedioxy,

$-(CH_2)_w-OR^8$, $-(CH_2)_wNC$, $-(CH_2)_wCN$, $-(CH_2)_wNO_2$, $-(CH_2)_wCF_3$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wNR^8R^9$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$, $-(CH_2)_wSO_2NH-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH-CO-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH-CO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH$, $-(CH_2)_wNHSO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wNHSO_2$-phenyl, $-(CH_2)_wNHSO_2$-perfluorophenyl, $-(CH_2)_wCN_4H$, $-O(C{=}O)-(C_1-C_5$-alkyl), $-O(CH_2)_wCN$, $-NH(CH_2)_wCN$, $-S(CH_2)_wCN$, $-(CH_2)_wNH-CO-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-perfluoroalkyl), $-(CH_2)_wNH-CO-$(phenyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-perfluoroalkyl), $-(CH_2)_wNH-CO_2-$(phenyl), $-(CH_2)_u$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18}, $-S-(CH_2)_u$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18}, or $-O-(CH_2)_u$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18};

R^{14} is

a) -H,

b) $-CF_3$

c) $-C_1-C_4$ alkyl,

d) $-(CH_2)_q$-aryl, wherein aryl is phenyl, biphenyl, naphthyl, or fluorenyl unsubstituted or substituted with one to three substituents selected from the group consisting of:

halogen (F, Cl, Br, I),

$-CF_3$,

$-(C_1-C_4$ alkyl),

$-(CH_2)_xR^{15}$,

$-(CH_2)_xCO(CH_2)_yR^{15}$,

$-(CH_2)_xC(O)O(CH_2)_yR^{15}$,

$-(CH_2)_xC(O)N[(CH_2)_yR^{15}][(CH_2)_yR^{16}]$,

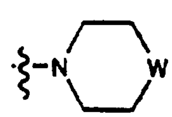
-methylenedioxy,

-(C1-C4 alkoxy),
$-(CH_2)_xO(CH_2)_yR^{15}$,
$-(CH_2)_xOCO(CH_2)_yR^{15}$,
$-(CH_2)_xOC(O)O(CH_2)_yR^{15}$,
$-(CH_2)_xOC(O)N[(CH_2)_yR^{15}][(CH_2)_yR^{16}]$,
$-(CH_2)_xOC(O)N[(CH_2)_yR^{15}][CO(CH_2)_yR^{16}]$,
$-(CH_2)_xS(O)_r(CH_2)_yR^{15}$,
$-(CH_2)_xS(O)_r(CH_2)_yCOR^{15}$,
$-(CH_2)_xS(O)_r(CH_2)_yC(O)OR^{15}$,
$-(CH_2)_xS(O)_rN[(CH_2)_yR^{15}][(CH_2)_yR^{16}]$
$-(CH_2)_xN[(CH_2)_yR^{15}][(CH_2)_yR^{16}]$,
$-(CH_2)_xN[(CH_2)_yR^{15}][CO(CH_2)_yR^{16}]$,
$-(CH_2)_xN[(CH_2)_yR^{15}][C(O)O(CH_2)_yR^{16}]$,
$-(CH_2)_xN[(CH_2)_yR^{15}]CON[(CH_2)_yR^{15}][(CH_2)_yR^{16}]$,
$-(CH_2)_xN[(CH_2)_yR^{15}]CON[(CH_2)_yR^{15}]$-
$[CO(CH_2)_yR^{16}]$,
$-(CH_2)_xN[(CH_2)_yR^{15}][S(O)_r(CH_2)_yR^{16}]$;

R^{15} and R^{16} are independently

a) hydrogen,
b) C_1-C_8 alkyl,
c) -(C_1-C_4 alkyl)-aryl, where aryl is defined above,
d) C_5-C_7 cycloalkyl,
e) phenyl, substituted by 0-3 R^{18},
f) benzyl, substituted by 0-3 R^{18}, or
g) -(C_1-C_4 alkoxy);

R^{15} and R^{16} can be taken together to form a ring:


;

R^{18} and R^{19} are independently
H, halo (F, Cl, Br, I), C_1-C_8-alkyl, C_3-C_8 cycloalkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, $-(CH_2)_w$-OR^8, $-(CH_2)_wCN$, $-(CH_2)_wNC$, $-(CH_2)_wNO_2$, $-(CH_2)_wCF_3$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wNR^8R^9$,

$-(CH_2)_wCOR^8$, $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$, $-(CH_2)_wSO_2NH-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH-CO-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH-CO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH-$, $-(CH_2)_wNHSO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wNHSO_2$-phenyl, $-(CH_2)_wNHSO_2$-perfluorophenyl, $-(CH_2)_wCN_4H$, $-O(C{=}O)-(C_1-C_5$-alkyl), $-O(CH_2)_wCN$, $-NH(CH_2)_wCN$, $-S(CH_2)_wCN$, $-(CH_2)_wNH-CO-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-perfluoroalkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-phenyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-phenyl), or $-O(C{=}O)$phenyl;

R18 and R19 can be taken together to form a methylenedioxy group;

R^{20} and R^{20a} are independently (C_1-C_8)alkyl, $-(CH_2)_u$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18}, (C_1-C_6)-perfluoroalkyl,or $-(CH_2)_r-D$;

m is 0 to 6;
n is 1 to 2;
p is 0 to 2;
q is 0 to 4.
r is 0 to 2;
s is 0 to 3;
t is 1 to 5;
u is 0 to 5;
v is 0 to 5;
w is 0 to 5;
x is 0 to 6;
y is 0 to 6;

D is fur-2-yl, fur-3-yl, thiophen-2-yl, thiophen-3-yl, oxazol-2-yl, oxazol-4-yl, thiazol-2-yl, thiazol-4-yl, isoxazol-3-yl, isoxazol-4-yl, isoxazol-5-yl, pyrid-2-yl, pyrid-4-yl, pyridazin-3-yl, pyridazin-4-yl, pyrimidin-2-yl, pyrimidin-4-yl, pyrazin-2-yl, or tetrazolyl;

E is $-CO-$, $-SO_2-$, $-CH_2-$ or a single bond;

F is $-CO-$;

W is

a) $-O-$,

b) $-S(O)_r-$,

c) $-NR^4-$,

d) $-NC(=O)R^3-$,

e) a bond, or

f) $-(CH_2)_n-$;

or prodrugs or pharmaceutically acceptable salts thereof.

Preferred compounds of formula (I) are those compounds wherein:

Z is

a) $-(CH_2)_mCONR^8-$,

b) $-(CH_2)_mCSNR^8-$,

c) $-(CH_2)_mSO_2NR^8-$,

R^1 is

a) $-(CH_2)_p$-aryl, wherein aryl is phenyl, naphthyl or biphenyl substituted with one, two or three substituents selected from the group consisting of:

halo (F, Cl, Br, I), methylenedioxy, $-R^8$, $-NR^8COR^9$, C_2-C_6-alkenyl, C_2-C_6-alkynyl, $-(CH_2)_w-OR^8$, $-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wCN$, $-(CH_2)_wNC$, $-(CH_2)_wNO_2$, $-(CH_2)_wCF_3$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wNR^8R^9$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$. $-(CH_2)_wSO_2NH-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH-CO-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH-CO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wNHSO_2$-phenyl, $-(CH_2)_wNHSO_2$-perfluorophenyl, $-(CH_2)_wCN_4H$, e-$O(CH_2)_wCN$, $-NH(CH_2)_wCN$, $-S(CH_2)_wCN$, $-(CH_2)_wNH-CO-(C_1-C_6$-alkyl$)$, $-(CH_2)_wNH-CO-(C_1-C_6-$

perfluoroalkyl), $-(CH_2)_wNH-CO-$(phenyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-perfluoroalkyl), or $-(CH_2)_wNH-CO_2-$(phenyl), $-O(C{=}O-(C_1-C_5$ alkyl);

b) heteroaryl, wherein heteroaryl is an unsubstituted, monosubstituted or disubstituted:

i) quinolinyl,

ii) isoquinolinyl,

iii) benzopyranyl,

iv) benzothiophenyl,

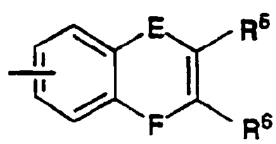
v) benzofuranyl,

vi) 5,6,7,8-tetrahydroquinolinyl,

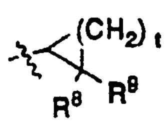
vii) 5,6,7,8-tetrahydroisoquinolinyl,

and wherein the substituents are selected from the group consisting of halo (F, Cl, Br, I), -CN, C_1-C_{10}-alkyl, C_3-C_8-cycloalkyl, C_2-C_{10}-alkenyl, C_2-C_{10}-alkynyl, R^8, $-OR^8$, $-NO_2$, $-CF_3$, $-S(O)_rR^7$, $-NR^8R^9$, $-COR^8$, $-CO_2R^8$, $-CONR^8H$, NR^8COR^9, $NR^8CO_2R^9$;

c)

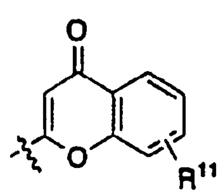


d)



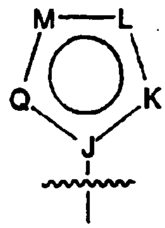
;

e)



;

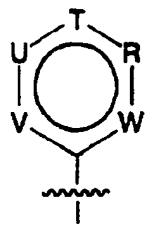
f) wherein the ring



represented by -J-K-L-M-Q- is a group selected from:

1) $-N-C(R^{13})=C(R^{13})-C(R^{13})=C(R^{13})-$,
2) $-N-C(R^{13})=C(R^{13})-C(R^{13})=N-$,
3) $-N-C(R^{13})=C(R^{13})-N=C(R^{13})-$,
4) $-N-C(R^{13})=N-C(R^{13})=N-$,
5) $-N-C(R^{13})=C(R^{13})-N=N-$
6) $-N-C(R^{13})=N-N=N-$,
7) $-N-N=C(R^{13})-N=N-$,
8) $=C-O-C(R^{13})=N-C(R^{13})=$,
9) $-C=C(R^{13})-O-C(R^{13})=N-$,
10) $=C-O-C(R^{13})=C(R^{13})-N=$,
11) $-C=C(R^{13})-C(R^{13})=N-O-$,
12) $=C-C(R^{13})=C(R^{13})-O-N=$,
13) $-C=C(R^{13})-O-N=C(R^{13})-$,
14) $=C-S-C(R^{13})=N-C(R^{13})=$,
15) $-C=C(R^{13})-S-C(R^{13})=N-$,
16) $=C-S-C(R^{13})=C(R^{13})-N=$,
17) $-C=N-S-N=C(R^{13})-$,
18) $-C=N-S-C(R^{13})=N-$,
19) $=C-S-N=C(R^{13})-N=$,
20) $=C-S-C(R^{13})=C(R^{13})-C(R^{13})=$,
21) $-C=C(R^{13})-S-C(R^{13})=C(R^{13})-$,
22) $=C-O-C(R^{13})=C(R^{13})-C(R^{13})=$, or
23) $-C=C(R^{13})-O-C(R^{13})=C(R^{13})-$;

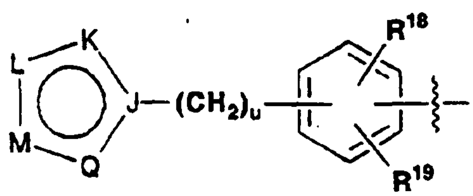
g) wherein the ring



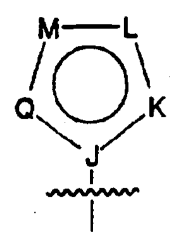
represented by -C-W-R-T-U-V- is a group selected from:

1) $-C{=}N-C(R^{13}){=}C(R^{13})-C(R^{13}){=}C(R^{13})-$,
2) $-C{=}C(R^{13})-N{=}C(R^{13})-C(R^{13}){=}C(R^{13})-$,
3) $-C{=}C(R^{13})-C(R^{13}){=}N-C(R^{13}){=}C(R^{13})-$,
4) $-C{=}N-N{=}C(R^{13})-C(R^{13}){=}C(R^{13})-$,
5) $-C{=}C(R^{13})-N{=}N-C(R^{13}){=}C(R^{13})-$,
6) $-C{=}N-C(R^{13}){=}C(R^{13})-C(R^{13}){=}N-$,
7) $-C{=}N-C(R^{13}){=}C(R^{13})-N{=}C(R^{13})-$,
8) $-C{=}N-C(R^{13}){=}N-C(R^{13}){=}C(R^{13})-$,
9) $-C{=}C(R^{13})-N{=}C(R^{13})-N{=}C(R^{13})-$,
10) $-C{=}N-C(R^{13}){=}N-N{=}C(R^{13})-$,
11) $-C{=}N-C(R^{13}){=}C(R^{13})-N{=}N-$, or
12) $-C{=}C(R^{13})-N{=}C(R^{13})-N{=}N-$;

h)

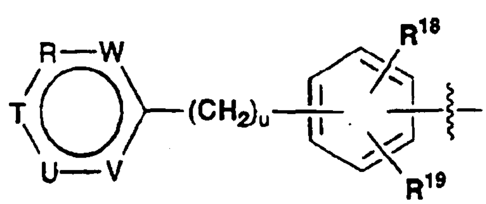


wherein

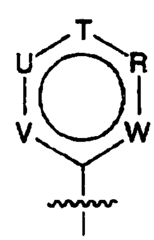


is as defined above;

i)

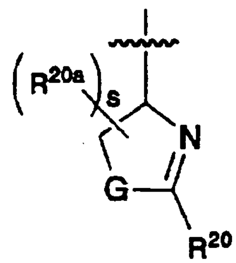


wherein



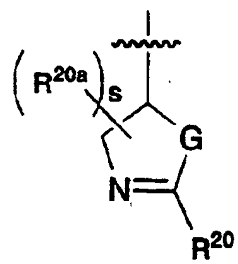
is as defined above;

j)



wherein G is O, S, or NP (where P is an amine protecting group selected from the group consisting of: $-R^3$, $-C(=O)R^3$, $-SO_2R^3$, $-C(=O)OR^3$;

k)



wherein G is O, S, or NP (where P is an amine protecting group selected from the group consisting of: $-R^3$, $-C(=O)R^3$, $-SO_2R^3$, $-C(=O)OR^3$;

R^{14} is

a) -H,

b) $-CF_3$

c) $-C_1-C_4$ alkyl,

d) $-(CH_2)_q$-aryl, wherein aryl is phenyl, biphenyl, naphthyl, or fluorenyl unsubstituted substituted with one to three substituents selected from the group consisting of:

halogen (F, Cl, Br, I),

$-CF_3$,

$-(C_1-C_4$ alkyl),

-methylenedioxy,

$-(C_1-C_4$ alkoxy),

$-(CH_2)_xN[(CH_2)_yR^{15}][(CH_2)_yR^{16}]$;

and all other required substituents of formula (I) are as defined in Claim 1.

More preferred compounds of the formula (I) are those compounds wherein:

A is

a) $-BY^1Y^2$,

b) $-C(=O)CF_3$,

c) $-C(=O)CHF_2$,

d) $-C(=O)CH_2F$,

e) $-C(=O)CH_2Cl$,

f) $-C(=O)OR^3$,

g) $-C(=O)NR^{15}R^{16}$,

h) $-C(=O)R^3$,

i) $-C(=O)COOR^3$,

j) $-C(=O)C(=O)NR^{15}R^{16}$,

k) $-C(=O)C(=O)R^3$,

l) -CHO;

Y^1 and Y^2 are independently

a) -OH, or

b) C_1-C_8 alkoxy;

Y^1 and Y^2 can be taken together to form a cyclic boron ester where said chain or ring contains from 2 to 20 carbon atoms and, from 0-3 heteroatoms which can be N, S, or O,

Z is

a) $-(CH_2)_mCONR^8-$,

b) $-(CH_2)_mCSNR^8-$, or

c) $-(CH_2)_mSO_2NR^8-$;

R^1 is

a) $-(CH_2)_p$-aryl, wherein aryl is phenyl, naphthyl or biphenyl substituted with one, two or three substituents independently selected at each occurrence from the group consisting of:

halo (F, Cl, Br, I), methylenedioxy, $-R^8$, $-NR^8COR^9$, C_2-C_6-alkenyl, C_2-C_6-alkynyl,

$-(CH_2)_w-OR^8$, $-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wCN$, $-(CH_2)_wNC$, $-(CH_2)_wNO_2$, $-(CH_2)_wCF_3$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wNR^8R^9$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$, $-(CH_2)_wSO_2NH-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH-CO-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH-CO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH-$, $-(CH_2)_wNHSO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wNHSO_2$-phenyl, $-(CH_2)_wNHSO_2$-perfluorophenyl, $-(CH_2)_wCN_4H$, $-O(CH_2)_wCN$, $-NH(CH_2)_wCN$, $-S(CH_2)_wCN$, $-(CH_2)_wNH-CO-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-perfluoroalkyl), $-(CH_2)_wNH-CO-$(phenyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-perfluoroalkyl), or $-(CH_2)_wNH-CO_2-$(phenyl), $-O(C{=}O)-C_1-C_5$-alkyl);

b) heteroaryl, wherein heteroaryl is an unsubstituted, monosubstituted or disubstituted:

i) quinolinyl,

ii) isoquinolinyl,

iii) benzopyranyl,

iv) benzothiophenyl,

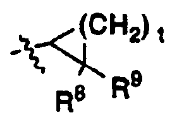
v) benzofuranyl,

vi) 5,6,7,8-tetrahydroquinolinyl,

vii) 5,6,7,8-tetrahydroisoquinolinyl,

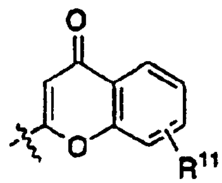
wherein the substituents are members selected from the group consisting of: halo (F, Cl, Br, I), -CN, C_1-C_{10}-alkyl, C_3-C_8-cycloalkyl, C_2-C_{10}-alkenyl, C_2-C_{10}-alkynyl, R^8, $-OR^8$, $-NO_2$, $-CF_3$, $-S(O)_rR^7$, $-NR^8R^9$, $-COR^8$, $-CO_2R^8$, $-CONR^8H$, NR^8COR^9, $NR^8CO_2R^9$;

c)



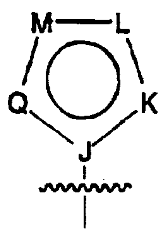
;

d)



;

e)



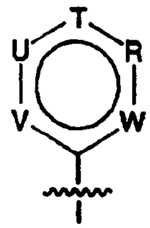
wherein the ring represented by -J-K-L-M-Q- is a group selected from:

1) -N-C(R^{13})=C(R^{13})-C(R^{13})=C(R^{13})-,
2) -N-C(R^{13})=C(R^{13})-C(R^{13})=N-,
3) -N-C(R^{13})=C(R^{13})-N=C(R^{13})-,
4) -N-C(R^{13})=N-C(R^{13})=N-,
5) -N-C(R^{13})=C(R^{13})-N=N-
6) -N-C(R^{13})=N-N=N-,
7) -N-N=C(R^{13})-N=N-,
8) =C-O-C(R^{13})=N-C(R^{13})=,
9) -C=C(R^{13})-O-C(R^{13})=N-,
10) =C-O-C(R^{13})=C(R^{13})-N=,
11) -C=C(R^{13})-C(R^{13})=N-O-,
12) =C-C(R^{13})=C(R^{13})-O-N=,
13) -C=C(R^{13})-O-N=C(R^{13})-,
14) =C-S-C(R^{13})=N-C(R^{13})=,
15) -C=C(R^{13})-S-C(R^{13})=N-,
16) =C-S-C(R^{13})=C(R^{13})-N=,
17) =C-S-C(R^{13})=C(R^{13})-C(R^{13})=,
18) -C=C(R^{13})-S-C(R^{13})=C(R^{13})-,

19) =C-O-C(R^{13})=C(R^{13})-C(R^{13})=, or

20) -C=C(R^{13})-O-C(R^{13})=C(R^{13})-;

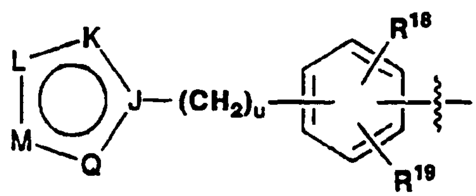
f)



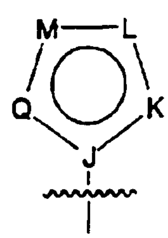
wherein the ring represented by -C-W-R-T-U-V- is a group selected from:

1) -C=N-C(R^{13})=C(R^{13})-C(R^{13})=C(R^{13})-,
2) -C=C(R^{13})-N=C(R^{13})-C(R^{13})=C(R^{13})-,
3) -C=C(R^{13})-C(R^{13})=N-C(R^{13})=C(R^{13})-,
4) -C=N-N=C(R^{13})-C(R^{13})=C(R^{13})-,
5) -C=C(R^{13})-N=N-C(R^{13})=C(R^{13})-,
6) -C=N-C(R^{13})=C(R^{13})-C(R^{13})=N-,
7) -C=N-C(R^{13})=C(R^{13})-N=C(R^{13})-,
8) -C=N-C(R^{13})=N-C(R^{13})=C(R^{13})-,
9) -C=C(R^{13})-N=C(R^{13})-N=C(R^{13})-,
10) -C=N-C(R^{13})=N-N=C(R^{13})-,
11) -C=N-C(R^{13})=C(R^{13})-N=N-, or
12) -C=C(R^{13})-N=C(R^{13})-N=N-;

g)

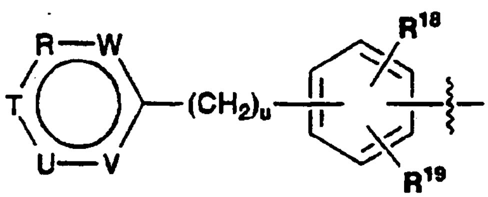


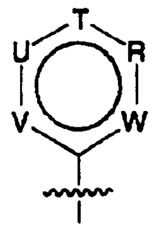
wherein



is as defined above;

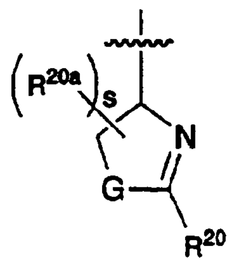
h)



wherein 

is as defined above; or

i)



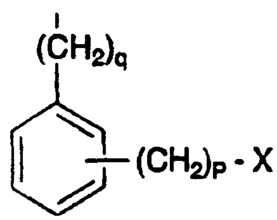
wherein G is O, S, or NP (where P is an amine protecting group selected from the group consisting of: $-R^3$, $-C(=O)R^3$, $-SO_2R^3$, $-C(=O)OR^3$);

R^2 is

a) -(C1-C12 alkyl)-X,

b) $-(C_2-C_{12}$ alkenyl)-X, or

c)



;

X is

a) halogen (F, Cl, Br, I),

b) -CN,

c) $-NO_2$,

d) $-CF_3$,

e) $-NHR^{14}$

f) $-NHS(O)_rR^{14}$,

g) -NHC(NH)H,
h) -NHC(NH)NHOH,
i) -NHC(NH)NHCN,
j) $-NHC(NH)NHR^{14}$,
k) $-NHC(NH)NHCOR^{14}$,
l) $-C(NH)NHR^{14}$,
m) $-C(NH)NHCOR^{14}$,
n) $-C(O)NHR^{14}$,
o) $-C(O)NHC(O)R^{14}$,
p) $-C(O)OR^{14}$,
q) $-OR^{14}$,
r) $-OC(O)R^{14}$,
s) $-OC(O)OR^{14}$,
t) $-OC(O)NHR^{14}$,
u) $-OC(O)NHC(O)R^{14}$,
v) $-SC(=NH)NHR^{14}$, or
w) $-SC(=NH)NHC(=O)R^{14}$;

R^{13} is

H, halogen (F, Cl, Br, I), (C_1-C_6)alkyl, $-(CH_2)_r-D$, methylenedioxy, $-(CH_2)_w-OR^8$, $-(CH_2)_wCONR^8R^9$, $-(CH_2)_wNC$, $-(CH_2)_wCN$, $-(CH_2)_wNO_2$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$, $-(CH_2)_wSO_2NH-(C_1-C_5)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH-CO-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH-CO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wNHSO_2$-phenyl, $-(CH_2)_wNHSO_2$-perfluorophenyl, $-(CH_2)_wCN_4H$, $-O(C=O)-(C_1-C_5$-alkyl), $-O(CH_2)_wCN$, $-NH(CH_2)_wCN$, $-S(CH_2)_wCN$, $-(CH_2)_wNH-CO-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-perfluoroalkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-phenyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-phenyl), $-(CH_2)_u$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18}, or -O(C=O)phenyl wherein the

phenyl contains 0-3 substituents selected from R^{18};

R^{14} is

a) -H,

b) $-CF_3$

c) -C1-C4 alkyl,

d) $-(CH_2)_q$-aryl, wherein aryl is phenyl, biphenyl, naphthyl, or fluorenyl are optionally substituted with one to three substituents selected from the group consisting of:

halogen (F, Cl, Br, I),

$-CF_3$,

-(C1-C4 alkyl),

-methylenedioxy,

-(C1-C4 alkoxy), or

$-(CH_2)_xN[(CH_2)_yR^{15}][(CH_2)_yR^{16}]$;

R^{18} and R^{19} are independently H, halo (F, Cl, Br, I), C_1-C_6-alkyl, $-(CH_2)_w-OR^8$, $-(CH_2)_wCN$, $-(CH_2)_wNC$, $-(CH_2)_wNO_2$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wNR^8R^9$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$, $-(CH_2)_wSO_2NH-(C_1-C_5)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH-CO-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH-CO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wNHSO_2$-phenyl, $-(CH_2)_wNHSO_2$-perfluorophenyl, $-(CH_2)_wCN_4H$, $-O(C{=}O)-(C_1-C_5$-alkyl), $-O(CH_2)_wCN$, $-NH(CH_2)_wCN$, $-S(CH_2)_wCN$, $-(CH_2)_wNH-CO-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-perfluoroalkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-phenyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-phenyl), or $-O(C{=}O)$phenyl;

R18 and R19 can be taken together to form a methylenedioxy group;

R^{20} and R^{20a} are independently

(C_1-C_8)alkyl, $-(CH_2)_u$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18}, (C_1-C_6)-perfluoroalkyl,or $-(CH_2)_r-D$;

D is fur-2-yl, fur-3-yl, thiophen-2-yl, thiophen-3-yl, oxazol-2-yl, oxazol-4-yl, thiazol-2-yl, thiazol-4-yl, pyrid-2-yl, pyrid-4-yl, pyrimidin-2-yl, or pyrimidin-4-yl;

W is

a) -O-,

b) $-NR^4-$,

c) a bond, or

d) $-(CH_2)_n-$;

and all other required substituents of formula (I) are as defined in Claim 2.

Most preferred compounds of the formula (I) are those compounds wherein:

A is $-BY^1Y^2$;

Y^1 and Y^2 are -OH;

Y^1 and Y^2 can be taken together to form a cyclic boron ester where said chain or ring contains from 2 to 20 carbon atoms and, from 0-3 heteroatoms which can be N, S, or O,

Z is $-(CH_2)_mCONR^8-$;

R^1 is

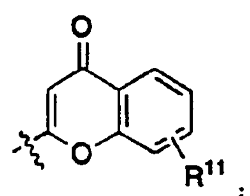
a) $-(CH_2)_p$-aryl, wherein aryl is phenyl, naphthyl or biphenyl substituted with one, two or three substituents selected from the group consisting of:

halo (F, Cl, Br, I), methylenedioxy, $-R^8$, $-NR^8COR^9$, C_2-C_6-alkenyl, C_2-C_6-alkynyl, $-(CH_2)_w-OR^8$, $-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wCN$, $-(CH_2)_wNC$, $-(CH_2)_wNO_2$, $-(CH_2)_wCF_3$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wNR^8R^9$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$. $-(CH_2)_wSO_2NH-(C_1-$

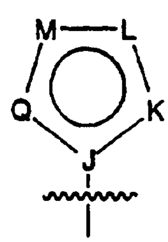
$C_6)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH-CO-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH-CO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wNHSO_2$-phenyl, $-(CH_2)_wNHSO_2$-perfluorophenyl, $-(CH_2)_wCN_4H$, $-O(CH_2)_wCN$, $-NH(CH_2)_wCN$, $-S(CH_2)_wCN$, $-(CH_2)_wNH-CO-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-perfluoroalkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-phenyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-perfluoroalkyl), or $-(CH_2)_wNH-CO_2-(C_1-C_6$-phenyl);

b) heteroaryl, wherein heteroaryl is an unsubstituted, monosubstituted or disubstituted isoquinolinyl wherein the substituents are members selected from the group consisting of:
halo (F, Cl, Br, I), -CN, C_1-C_{10}-alkyl, C_3-C_8-cycloalkyl, C_2-C_{10}-alkenyl, C_2-C_{10}-alkynyl, R^8, $-OR^8$, $-NO_2$, $-CF_3$, $-S(O)_rR^7$, $-NR^8R^9$, $-COR^8$, $-CO_2R^8$, $-CONR^8R^9$, NR^8COR^9, $NR^8CO_2R^9$,

c)



d)



wherein the ring represented by -J-K-L-M-Q- is a group selected from:

1) $-N-C(R^{13})=N-C(R^{13})=N-$,
2) $-N-C(R^{13})=C(R^{13})-N=N-$,

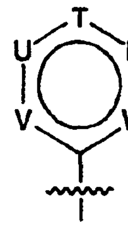
3) $-N-N=C(R^{13})-N=N-$,

5) $-N-C(R^{13})=N-N=N-$,

6) $=C-S-C(R^{13})=C(R^{13})-C(R^{13})=$, or

7) $=C-O-C(R^{13})=C(R^{13})-C(R^{13})=$;

e)



wherein the ring represented by $-C-W-R-T-U-V-$ is a group selected from:

1) $-C=N-C(R^{13})=C(R^{13})=C(R^{13})-C(R13)=C(R^{13})-$

1) $-C=C(R^{13})-N=C(R^{13})-C(R^{13})=C(R^{13})-$,

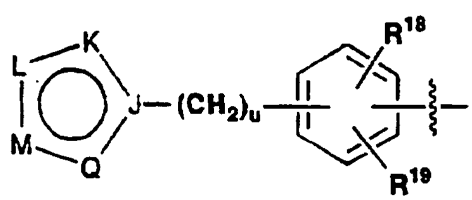
2) $-C=C(R^{13})-C(R^{13})=N-C(R^{13})=C(R^{13})-$,

3) $-C=C(R^{13})-N=C(R^{13})-N=C(R^{13})-$,

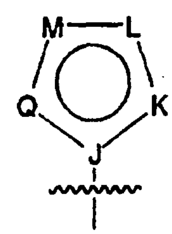
4) $-C=N-C(R^{13})=C(R^{13})-C(R^{13})=N-$, or

5) $-C=N-C(R^{13})=N-C(R^{13})=C(R^{13})-$;

f)

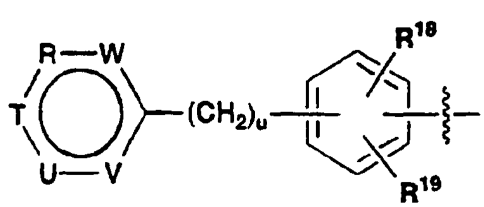


wherein

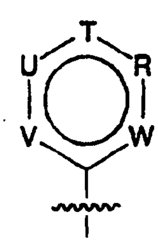


is as defined above;

g)

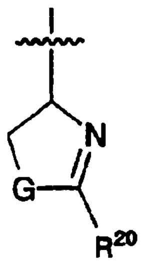


wherein



is as defined above; or

h)

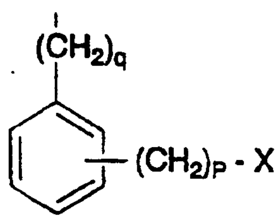


wherein G is S;

R^2 is

a) -(C1-C12 alkyl)-X, or

b)



;

X is

a) halogen (F, Cl, Br, I),

b) -CN,

c) $-NHR^{14}$

d) -NHC(NH)H,

e) $-NHC(NH)NHR^{14}$,

f) $-C(NH)NHR^{14}$,

g) $-OR^{14}$, or

h) $-SC(=NH)NHR^{14}$;

R^{11} is H;

R^{13} is

H, halogen (F, Cl, Br, I), $-(CH_2)_wNO_2$, $(C_1$-$C_6)$alkyl, $-(CH_2)_r$-D, $-(CH_2)_w-OR^8$, $-(CH_2)_wCONR^8R^9$, $-(CH_2)_wCN$, $-(CH_2)_wNC$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCO_2R^3$, $-(CH_2)_wNR^8R^3$, $-(CH_2)_wS(O)_2R^7$, -(CH2wSO2NHCO-(C1-C6)-alkyl, -(CH2)wNHSO2-phenyl $-(CH_2)_wSO_2NH-(C_1$-$C_5)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH-CO_2-(C_1$-$C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1$-$C_6)$-alkyl,

$-(CH_2)_wNHSO_2-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wCN_4H$, $-O(C{=}O)-(C_1-C_5$-alkyl), $-O(CH_2)_tCN$, $-NH(CH_2)_tCN$, $-S(CH_2)_tCN$, $-(CH_2)_wNH-CO-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-perfluoroalkyl), or $-(CH_2)_u$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18};

R^{14} is -H;

R^{18} and R^{19} are independently H, halo (F, Cl, Br, I), C_1-C_6-alkyl, $-(CH_2)_w-OR^8$, $-(CH_2)_wCN$, $-(CH_2)_wNC$, $-(CH_2)_wNO_2$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wNR^8R^9$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$, $-(CH_2)_wSO_2NH-(C_1-C_5)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH-CO-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH-CO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wNHSO_2$-phenyl, $-(CH_2)_wNHSO_2$-perfluorophenyl, $-(CH_2)_wCN_4H$, $-O(C{=}O)-(C_1-C_5$-alkyl), $-O(CH_2)_tCN$, $-NH(CH_2)_tCN$, $-S(CH_2)_tCN$, $-(CH_2)_wNH-CO-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-perfluoroalkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-phenyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-phenyl), or $-O(C{=}O)$phenyl;

R18 and R19 can be taken together to form a methylenedioxy group;

R^{20} is selected from the group consisting of: $(CH_2)_r$-D, or $-(CH_2)_u$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18};

and all other required substituents of formula (I) are defined as in Claim 3.

Specifically preferred are those most preferred compounds listed below:

N^1-(4-phenylbenzoyl)-(*R*)-boroarginine, hydrochloride
N^1-(3-phenoxybenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(1-fluorenonyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-[1-butyl]benzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-benzoylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(5-phenyl-2-furoyl)-(*R*)-boroarginine, hydrochloride

N^1-(3-[*N*-benzyloxycarbonyl-*N*-methylamino]-4-[1-butyl]-benzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-phenyl-4-isoquinoloyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-cyclohexylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-methyl-4-phenylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-[4-phenyl-2-nitrobenzoyl]boroArg, (+)-pinanediol ester

N^1-[4-phenyl-2-fluorobenzoyl]boroArg, (+)-pinanediol ester

N^1-[4-phenyl-2-aminobenzoyl]boroArg, (+)-pinanediol ester

N^1-[4-phenyl-2-(methylsulfonamido)benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-phenyl-2-(cyanomethylamino)benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-phenyl-2-(cyanomethyl)benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-phenyl-2-(diethylamino)benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroArg, (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-methyl-benzoyl]boroArg, (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]benzoyl]boroArg-OH

N^1-[4-[2-(n-butoxycarbonylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-[2-(diethylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroArg, (+)pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-fluoro-benzoyl]boroArg, (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-fluoro-benzoyl]boroArg, (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-fluoro-benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-nitro-benzoyl]boroArg, (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-nitro-benzoyl]boroArg, (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-nitro-benzoyl]boroArg, (+)-pinanediol ester

N^1-(3-phenylbenzoyl)boroarg, (+)-pinanediol

N^1-[4-(3-BOCNHphenyl)2-methylbenzoyl]boroarg, (+)-pinanediol

N^1-(5-phenyl-2-furoyl)boroarg, (+)-pinanediol

N^1-(5-phenyl-2-thienyl)boroarg, (+)-pinanediol

N^1-[4-(3-nitrophenyl)benzoyl]boroarg, (+)-pinanediol

N^1-[4-(3-aminophenyl)benzoyl]boroarg, (+)-pinanediol

N^1-(3-phenylbenzoyl)borolys, (+)-pinanediol

N^1-(5-phenyl-2-furoyl)boroarg-OH

N^1-(3-phenylbenzoyl)boroIrg, (+)-pinanediol

(R)-[5-amino-1-[[[5-(phenylmethyl)-1H-1,2,4-triazol-1-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β]]-(1,1-dimethylethyl) [3-[5-[[[4-[(amino-iminomethyl)amino]-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzo-dioxaborol-2-yl)butyl]amino]carbonyl]-2-thienyl]phenyl]carbamate hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-

2-yl)pentyl]-5-(phenyl-methyl)-3-(2H-tetrazol-5-ylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-1-[2-[[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]amino]-2-oxoethyl]-5-(phenylmethyl)-1H-1,2,4-triazole-3-acetic acid hydrochloride 1:1 with [3aS-[2(S*),3aα,4β,6β,7aα]]-1-[2-[[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]amino]-2-oxoethyl]-3-(phenylmethyl)-1H-1,2,4-triazole-5-acetic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-methyl 1-[2-[[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-amino]-2-oxoethyl]-5-(phenylmethyl)-1H-1,2,4-triazole-3-acetate hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-methyl 1-[2-[[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-amino]-2-oxoethyl]-3-(phenylmethyl)-1H-1,2,4-triazole-5-acetate hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3-phenyl-5-(phenyl-methyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

(R)-[5-amino-1-[[[3-phenyl-5-(phenylmethyl)-1H-1,2,4-triazol-1-yl]acetyl]-amino]pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3-(3-nitro-phenyl)-5-(phenylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[4-[(aminoiminomethyl)-amino]-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)butyl]-3-(3-

nitrophenyl)-5-(phenylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3,5-bis(phenyl-methyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[4-[(aminoiminomethyl)-amino]-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)butyl]-3,5-bis(phenylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3-(phenylmethyl)-1H-1,2,4-triazole-1-acetamide

(R)-[5-amino-1-[[[3-(phenylmethyl)-1H-1,2,4-triazol-1-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-5-methyl-3-(phenylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(R*),3aα,4β,6β]]-N-[5-amino-1-(hexahydro-3a,5,5-tri-methyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-5-[(phenyl-methoxy)methyl]-3-(phenylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-5-(cyanomethyl)-3-(phenylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3-(phenylmethyl)-5-propyl-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-

2-yl)pentyl]-5-phenyl-3-(phenylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

(R)-[5-amino-1-[[[5-methyl-3-(phenylmethyl)-1H-1,2,4-triazol-1-yl]acetyl]-amino]pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3-phenyl-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-5-methyl-3-phenyl-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-5-(2-phenyl-ethyl)-1H-1,2,4-triazole-1-acetamide

(R)-[5-amino-1-[[[5-(2-phenylethyl)-1H-1,2,4-triazol-1-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3,5-bis(2-phenyl-ethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

(R)-[5-amino-1-[[[3,5-bis(2-phenylethyl)-1H-1,2,4-triazol-1-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3-(2-phenylethyl)-1H-1,2,4-triazole-1-acetamide

(R)-[5-amino-1-[[[3-(2-phenylethyl)-1H-1,2,4-triazol-1-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3-(3-phenyl-propyl)-1H-1,2,4-triazole-1-acetamide

(R)-[5-amino-1-[[[5-(3-phenylpropyl)-1H-1,2,4-triazol-1-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

(R)-[5-amino-1-[[[3-(3-phenylpropyl)-1H-1,2,4-triazol-1-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-1,5-bis(phenyl-methyl)-1H-1,2,4-triazole-3-acetamide hydrochloride 2:8 with (R)-[5-amino-1-[[[1,5-bis(phenylmethyl)-1H-1,2,4-triazol-3-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-4-methyl-2-phenyl-5-pyrimidinecarboxamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-2,4-diphenyl-5-pyrimidinecarboxamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[4-[(amimoiminomethyl)amino]-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)-butyl]-4-methyl-2-phenyl-5-pyrimidinecarboxamide hydrochloride

[3aS-[2(S*),3α,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-6-phenyl-3-pyridinecarboxamide hydrochloride

(R)-[5-amino-1-[[(6-phenyl-3-pyridinyl)carbonyl]amino]pentyl]boronic acid dihydrochloride

Illustrative of the compounds of this invention are the following:

N^1-(4-phenylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(3-phenylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(3-phenoxybenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-[4-pyridyl]benzoyl)-(R)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-benzoylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(3-benzoylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-benzoylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(3-[*N*-benzyloxycarbonyl]aminobenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(3-[*N*-benzyloxycarbonyl-*N*-methyl]aminobenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-ethylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-*n*-propylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-isopropylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-*n*-butylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-*tert*-butylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-*n*-hexylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-cyclohexylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-[*N*-(2-phenylethyl)carbonyl]aminobenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-*n*-butyloxybenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-[*N*-cyclopropylcarbonyl]aminobenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-[*N*-cyclohexylcarbonyl]aminobenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-[*N*-(4-methoxy)benzoyl]aminobenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-[4-methoxy]phenylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-[2-phenyl]benzyloxycarbonylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-[1-naphthyl]benzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-[4-carboxy]phenylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(4-phenylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(3-phenylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(3-phenoxybenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-benzoylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(3-benzoylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(4-benzoylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(3-[*N*-benzyloxycarbonyl]aminobenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(3-[*N*-benzyloxycarbonyl-*N*-methyl]aminobenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(4-ethylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(4-*n*-propylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(4-isopropylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-(4-*n*-butylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-(4-*tert*-butylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-(4-*n*-hexylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-(4-cyclohexylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-(2-[*N*-(2-phenylethyl)carbonyl]aminobenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-(4-*n*-butyloxybenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-(4-[*N*-cyclopropylcarbonyl]aminobenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-(4-[*N*-cyclohexylcarbonyl]aminobenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-(4-[*N*-(4-methoxy)benzoyl]aminobenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-(4-[4-methoxy]phenylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-(2-[2-phenylbenzyloxycarbonyl]benzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-(2-[1-naphthyl]benzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-(4-[4-carboxy]phenylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-([2-anthraquinonyl]carbonyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N[1]-([2-dioxothioxanthinonyl]carbonyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N[1]-([2-anthraquinonyl]carbonyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-([2-dioxothioxanthinonyl]carbonyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N[1]-([2-fluoren-9-onyl]carbonyl)-(*R*)-borothiohomoarginine (+)-pinanediol, hydrobromide

N^1-([2-fluoren-9-onyl]carbonyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-([2-fluoren-9-onyl]carbonyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-([3-fluoren-9-onyl]carbonyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-([3-fluoren-9-onyl]carbonyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-([4-fluoren-9-onyl]carbonyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-([4-fluoren-9-onyl]carbonyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(1-naphthoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(1-naphthoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-methyl-4-phenyl-5-methoxybenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-methyl-4-phenyl-5-carboxamidobenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-methyl-4-phenyl-5-fluorobenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-methyl-4-phenyl-5-trifluoromethylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-methyl-4-phenyl-5-chlorobenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-methyl-4-phenyl-5-hydroxybenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-methyl-4-[4-carboxy]phenyl-5-methoxybenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-methyl-4-[4-carboxy]phenyl-5-carboxamidobenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-methyl-4-[4-carboxy]phenyl-5-fluorobenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-methyl-4-[4-carboxy]phenyl-5-trifluoromethylbenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-methyl-4-[4-carboxy]phenyl-5-chlorobenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-methyl-4-[4-carboxy]phenyl-5-hydroxybenzoyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-methyl-4-phenyl-5-methoxybenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-methyl-4-phenyl-5-carboxamidobenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-methyl-4-phenyl-5-fluorobenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-methyl-4-phenyl-5-trifluoromethylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-methyl-4-phenyl-5-chlorobenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-methyl-4-phenyl-5-hydroxybenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-methyl-4-[4-carboxy]phenyl-5-methoxybenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-methyl-4-[4-carboxy]phenyl-5-carboxamidobenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-methyl-4-[4-carboxy]phenyl-5-fluorobenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-methyl-4-[4-carboxy]phenyl-5-trifluoromethylbenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-methyl-4-[4-carboxy]phenyl-5-chlorobenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-methyl-4-[4-carboxy]phenyl-5-hydroxybenzoyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-[5-phenyl]furylcarbonyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-[5-phenyl]thiophen-ylcarbonyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-[5-phenyl]furylcarbonyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-[5-phenyl]thiophen-ylcarbonyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(3-[6-phenyl]pyridylcarbonyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(3-[5-benzyloxy]pyridylcarbonyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(3-[6-phenyl]pyridylcarbonyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(3-[5-benzyloxy]pyridylcarbonyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-benzopyronylcarbonyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-benzopyronylcarbonyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(3-isoquinolinylcarbonyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-phenyl-4-isoquinolinylcarbonyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(3-isoquinolinylcarbonyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-phenyl-4-isoquinolinylcarbonyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(2-isoquinolinylcarbonyl)-(*R*)-boroarginine (+)-pinanediol, bisulfite

N^1-(2-isoquinolinylcarbonyl)-(*R*)-borothioarginine (+)-pinanediol, hydrobromide

N^1-(4-phenylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(3-phenylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(3-phenoxybenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-[4-pyridyl]benzoyl)-(R)-boroarginine, hydrochloride

N^1-(2-benzoylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(3-benzoylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-benzoylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(3-[*N*-benzyloxycarbonyl]aminobenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(3-[*N*-benzyloxycarbonyl-*N*-methyl]aminobenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-ethylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-*n*-propylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-isopropylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-*tert*-butylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-*n*-hexylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-cyclohexylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-[*N*-(2-phenylethyl)carbonyl]aminobenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-*n*-butyloxybenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-[*N*-cyclopropylcarbonyl]aminobenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-[*N*-cyclohexylcarbonyl]aminobenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-[*N*-(4-methoxy)benzoyl]aminobenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-[4-methoxy]phenylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-[2-phenyl]benzyloxycarbonylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-[1-naphthyl]benzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-[4-carboxy]phenylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-([2-anthraquinonyl]carbonyl)-(*R*)-boroarginine, hydrochloride

N^1-([2-dioxothioxanthinonyl]carbonyl)-(*R*)-boroarginine, hydrochloride

N^1-([2-fluoren-9-onyl]carbonyl)-(*R*)-boroarginine, hydrochloride

N^1-([3-fluoren-9-onyl]carbonyl)-(*R*)-boroarginine, hydrochloride

N^1-(1-naphthoyl)-(*R*)-boroarginine, hydrochloride

N^1-([4-fluoren-9-onyl]carbonyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-methyl-4-phenyl-5-methoxybenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-methyl-4-phenyl-5-carboxamidobenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-methyl-4-phenyl-5-fluorobenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-methyl-4-phenyl-5-trifluoromethylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-methyl-4-phenyl-5-chlorobenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-methyl-4-phenyl-5-hydroxybenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-methoxybenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-carboxamidobenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-fluorobenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-trifluoromethylbenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-chlorobenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-hydroxybenzoyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-[5-phenyl]furylcarbonyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-[5-phenyl]thiophen-ylcarbonyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-benzopyronylcarbonyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-isoquinolinylcarbonyl)-(*R*)-boroarginine, hydrochloride

N^1-(3-isoquinolinylcarbonyl)-(*R*)-boroarginine, hydrochloride

N^1-(2-phenyl-4-isoquinolinylcarbonyl)-(*R*)-boroarginine, hydrochloride

N^1-(4-phenylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(3-phenylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(3-phenoxybenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-benzoylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(3-benzoylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(4-benzoylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(3-[*N*-benzyloxycarbonyl]aminobenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(3-[*N*-benzyloxycarbonyl-*N*-methyl]aminobenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(4-ethylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(4-*n*-propylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(4-isopropylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(4-*n*-butylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(4-tert-butylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(4-*n*-hexylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(4-cyclohexylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-[*N*-(2-phenylethyl)carbonyl]aminobenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(4-*n*-butyloxybenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(4-[*N*-cyclopropylcarbonyl]aminobenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(4-[*N*-cyclohexylcarbonyl]aminobenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(4-[*N*-(4-methoxy)benzoyl]aminobenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(4-[4-methoxy]phenylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-[2-phenylbenzyloxycarbonyl]benzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-[1-naphthyl]benzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(4-[4-carboxy]phenylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-([2-anthraquinonyl]carbonyl)-(*R*)-borothioarginine, hydrochloride

N^1-([2-dioxothioxanthinonyl]carbonyl)-(*R*)-borothioarginine, hydrochloride

N^1-([2-fluoren-9-onyl]carbonyl)-(*R*)-borothiohomoarginine, hydrochloride

N^1-([2-fluoren-9-onyl]carbonyl)-(*R*)-borothioarginine, hydrochloride

N^1-([3-fluoren-9-onyl]carbonyl)-(*R*)-borothioarginine, hydrochloride

N^1-([4-fluoren-9-onyl]carbonyl)-(*R*)-borothioarginine, hydrochloride

N^1-(1-naphthoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-methyl-4-phenyl-5-methoxybenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-methyl-4-phenyl-5-carboxamidobenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-methyl-4-phenyl-5-fluorobenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-methyl-4-phenyl-5-trifluoromethylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-methyl-4-phenyl-5-chlorobenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-methyl-4-phenyl-5-hydroxybenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-methoxybenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-carboxamidobenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-fluorobenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-trifluoromethylbenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-chlorobenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-hydroxybenzoyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-[5-phenyl]furylcarbonyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-[5-phenyl]thiophenylcarbonyl)-(*R*)-borothioarginine, hydrochloride

N^1-(3-[6-phenyl]pyridylcarbonyl)-(*R*)-boroarginine, hydrochloride

N^1-(3-[5-benzyloxy]pyridylcarbonyl)-(*R*)-boroarginine, hydrochloride

N^1-(3-[6-phenyl]pyridylcarbonyl)-(*R*)-borothioarginine, hydrochloride

N^1-(3-[5-benzyloxy]pyridylcarbonyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-benzopyronylcarbonyl)-(*R*)-borothioarginine, hydrochloride

N^1-(3-isoquinolinylcarbonyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-phenyl-4-isoquinolinylcarbonyl)-(*R*)-borothioarginine, hydrochloride

N^1-(2-isoquinolinylcarbonyl)-(*R*)-borothioarginine, hydrochloride

N^1-(4-phenylbenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(3-phenylbenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(3-phenoxybenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(4-[4-pyridyl]benzoyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-benzoylbenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(3-benzoylbenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(4-benzoylbenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(3-[*N*-benzyloxycarbonyl]aminobenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(3-[*N*-benzyloxycarbonyl-*N*-methyl]aminobenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(4-ethylbenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(4-*n*-propylbenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(4-isopropylbenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(4-*tert*-butylbenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(4-*n*-hexylbenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(4-cyclohexylbenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-[N-(2-phenylethyl)carbonyl]aminobenzoyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-(4-n-butyloxybenzoyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-(4-[N-cyclopropylcarbonyl]aminobenzoyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-(4-[N-cyclohexylcarbonyl]aminobenzoyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-(4-[N-(4-methoxy)benzoyl]aminobenzoyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-(4-[4-methoxy]phenylbenzoyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-[2-phenyl]benzyloxycarbonylbenzoyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-[1-naphthyl]benzoyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-(4-[4-carboxy]phenylbenzoyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-([2-anthraquinonyl]carbonyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-([2-dioxothioxanthinonyl]carbonyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-([2-fluoren-9-onyl]carbonyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-([3-fluoren-9-onyl]carbonyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-(1-naphthoyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-([4-fluoren-9-onyl]carbonyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-methyl-4-phenyl-5-methoxybenzoyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-methyl-4-phenyl-5-carboxamidobenzoyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-methyl-4-phenyl-5-fluorobenzoyl)-(R)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-methyl-4-phenyl-5-trifluoromethylbenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-methyl-4-phenyl-5-chlorobenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-methyl-4-phenyl-5-hydroxybenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-methoxybenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-carboxamidobenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-fluorobenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-trifluoromethylbenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-chlorobenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-hydroxybenzoyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-[5-phenyl]furylcarbonyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-[5-phenyl]thiophen-ylcarbonyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-benzopyronylcarbonyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-isoquinolinylcarbonyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(3-isoquinolinylcarbonyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(2-phenyl-4-isoquinolinylcarbonyl)-(*R*)-borolysine (+)-pinanediol, hydrochloride

N^1-(4-phenylbenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(3-phenylbenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(3-phenoxybenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(4-[4-pyridyl]benzoyl)-(R)-borolysine, hydrochloride

N^1-(2-benzoylbenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(3-benzoylbenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(4-benzoylbenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(3-[*N*-benzyloxycarbonyl]aminobenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(3-[*N*-benzyloxycarbonyl-*N*-methyl]aminobenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(4-ethylbenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(4-*n*-propylbenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(4-isopropylbenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(4-*tert*-butylbenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(4-*n*-hexylbenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(4-cyclohexylbenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(2-[*N*-(2-phenylethyl)carbonyl]aminobenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(4-*n*-butyloxybenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(4-[*N*-cyclopropylcarbonyl]aminobenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(4-[*N*-cyclohexylcarbonyl]aminobenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(4-[*N*-(4-methoxy)benzoyl]aminobenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(4-[4-methoxy]phenylbenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(2-[2-phenyl]benzyloxycarbonylbenzoyl)-(*R*)-borolysine, hydrochloride
N^1-(2-[1-naphthyl]benzoyl)-(*R*)-borolysine, hydrochloride
N^1-(4-[4-carboxy]phenylbenzoyl)-(*R*)-borolysine, hydrochloride
N^1-([2-anthraquinonyl]carbonyl)-(*R*)-borolysine, hydrochloride
N^1-([2-dioxothioxanthinonyl]carbonyl)-(*R*)-borolysine, hydrochloride
N^1-([2-fluoren-9-onyl]carbonyl)-(*R*)-borolysine, hydrochloride

N^1-([3-fluoren-9-onyl]carbonyl)-(*R*)-borolysine, hydrochloride

N^1-(1-naphthoyl)-(*R*)-borolysine, hydrochloride

N^1-([4-fluoren-9-onyl]carbonyl)-(*R*)-borolysine, hydrochloride

N^1-(2-methyl-4-phenyl-5-methoxybenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(2-methyl-4-phenyl-5-carboxamidobenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(2-methyl-4-phenyl-5-fluorobenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(2-methyl-4-phenyl-5-trifluoromethylbenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(2-methyl-4-phenyl-5-chlorobenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(2-methyl-4-phenyl-5-hydroxybenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-methoxybenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-carboxamidobenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-fluorobenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-trifluoromethylbenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-chlorobenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(2-methyl-4-[4-carboxy]phenyl-5-hydroxybenzoyl)-(*R*)-borolysine, hydrochloride

N^1-(2-[5-phenyl]furylcarbonyl)-(*R*)-borolysine, hydrochloride

N^1-(2-[5-phenyl]thiophenylcarbonyl)-(*R*)-borolysine, hydrochloride

N^1-(2-benzopyronylcarbonyl)-(*R*)-borolysine, hydrochloride

N^1-(2-isoquinolinylcarbonyl)-(*R*)-borolysine, hydrochloride

N^1-(3-isoquinolinylcarbonyl)-(*R*)-borolysine, hydrochloride

N^1-(2-phenyl-4-isoquinolinylcarbonyl)-(*R*)-borolysine, hydrochloride

N^1-(2-methyl-4-phenylbenzoyl)-R-borolysine, hydrochloride

N1-(2-methyl-4-phenylbenzoyl)-R-borolysine, (+)-pinanediol, hydrochloride

N^1-(2-methyl-4-phenylbenzoyl)-R-borothioarginine, hydrobromide

N^1-(2-methyl-4-phenylbenzoyl)-R-borothioarginine, (+)-pinanediol, hydrochloride

N^1-(2-methyl-4-phenylbenzoyl)-R-boroarginine, hydrochloride

N^1-(2-methyl-4-phenylbenzoyl)-R-boroarginine, (+)-pinanediol, bisulfite

N^1-[4-phenyl-2-nitrobenzoyl]boroArg(Me), (+)-pinanediol ester

N^1-[4-phenyl-2-fluorobenzoyl]boroArg(Me), (+)-pinanediol ester

N^1-[4-phenyl-2-aminobenzoyl]boroArg(Me), (+)-pinanediol ester

N^1-[4-phenyl-2-(methylsulfonamido)benzoyl]boroArg(Me), (+)-pinanediol ester

N^1-[4-phenyl-2-(cyanomethylamino)benzoyl]boroArg(Me), (+)-pinanediol ester

N^1-[4-phenyl-2-(cyanomethyl)benzoyl]boroArg(Me), (+)-pinanediol ester

N^1-[4-phenyl-2-(diethylamino)benzoyl]boroArg(Me), (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroArg(Me), (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-methyl-benzoyl]boroArg(Me), (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroArg(Me), (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]benzoyl]boroArg(Me), (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]benzoyl]boroArg(Me)-OH

N^1-[4-[2-(n-butoxycarbonylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroArg(Me), (+)-pinanediol ester

N^1-[4-[2-(diethylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroArg(Me), (+)pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-fluoro-benzoyl]boroArg(Me), (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-fluoro-benzoyl]boroArg(Me), (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-fluoro-benzoyl]boroArg(Me), (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-nitro-benzoyl]boroArg(Me), (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-nitro-benzoyl]boroArg(Me), (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-nitro-benzoyl]boroArg(Me), (+)-pinanediol ester.

N^1-[4-phenyl-2-nitrobenzoyl]boroMPG, (+)-pinanediol ester

N^1-[4-phenyl-2-fluorobenzoyl]boroMPG, (+)-pinanediol ester

N^1-[4-phenyl-2-aminobenzoyl]boroMPG, (+)-pinanediol ester

N^1-[4-phenyl-2-(methylsulfonamido)benzoyl]boroMPG, (+)-pinanediol ester

N^1-[4-phenyl-2-(cyanomethylamino)benzoyl]boroMPG, (+)-pinanediol ester

N^1-[4-phenyl-2-(cyanomethyl)benzoyl]boroMPG, (+)-pinanediol ester

N^1-[4-phenyl-2-(diethylamino)benzoyl]boroMPG, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroMPG, (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-methyl-benzoyl]boroMPG, (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroMPG, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl] benzoyl]boroMPG, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl] benzoyl]boroMPG-OH

N^1-[4-[2-(n-butoxycarbonylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroMPG, (+)-pinanediol ester

N^1-[4-[2-(diethylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroMPG, (+)pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-fluoro-benzoyl]boroMPG, (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-fluoro-benzoyl]boroMPG, (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-fluoro-benzoyl]boroMPG, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-nitro-benzoyl]boroMPG, (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-nitro-benzoyl]boroMPG, (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-nitro-benzoyl]boroMPG, (+)-pinanediol ester.

N^1-[4-phenyl-2-nitrobenzoyl]boroACA, (+)-pinanediol ester

N^1-[4-phenyl-2-fluorobenzoyl]boroACA, (+)-pinanediol ester

N^1-[4-phenyl-2-aminobenzoyl]boroACA, (+)-pinanediol ester

N^1-[4-phenyl-2-(methylsulfonamido)benzoyl]boroACA, (+)-pinanediol ester

N^1-[4-phenyl-2-(cyanomethylamino)benzoyl]boroACA, (+)-pinanediol ester

N^1-[4-phenyl-2-(cyanomethyl)benzoyl]boroACA, (+)-pinanediol ester

N^1-[4-phenyl-2-(diethylamino)benzoyl]boroACA, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroACA, (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-methyl-benzoyl]boroACA, (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroACA, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl] benzoyl]boroACA, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl] benzoyl]boroACA-OH

N^1-[4-[2-(n-butoxycarbonylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroACA, (+)-pinanediol ester

N^1-[4-[2-(diethylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroACA, (+)pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-fluoro-benzoyl]boroACA, (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-fluoro-benzoyl]boroACA, (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-fluoro-benzoyl]boroACA, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-nitro-benzoyl]boroACA, (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-nitro-benzoyl]boroACA, (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-nitro-benzoyl]boroACA, (+)-pinanediol ester

N^1-[4-phenyl-2-nitrobenzoyl]boroLys, (+)-pinanediol ester

N^1-[4-phenyl-2-fluorobenzoyl]boroLys, (+)-pinanediol ester

N^1-[4-phenyl-2-aminobenzoyl]boroLys, (+)-pinanediol ester

N^1-[4-phenyl-2-(methylsulfonamido)benzoyl]boroLys, (+)-pinanediol ester

N^1-[4-phenyl-2-(cyanomethylamino)benzoyl]boroLys, (+)-pinanediol ester

N^1-[4-phenyl-2-(cyanomethyl)benzoyl]boroLys, (+)-pinanediol ester

N^1-[4-phenyl-2-(diethylamino)benzoyl]boroLys, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroLys, (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-methyl-benzoyl]boroLys, (+)pinanediol ester

N^1-[4-[2-(methoxycabonylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroLys, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]benzoyl]boroLys, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]benzoyl]boroLys-OH

N^1-[4-[2-(n-butoxycarbonylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroLys, (+)-pinanediol ester

N^1-[4-[2-(diethylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroLys, (+)pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-fluoro-benzoyl]boroLys, (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-fluoro-benzoyl]boroLys, (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-fluoro-benzoyl]boroLys, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-nitro-benzoyl]boroLys, (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-nitro-benzoyl]boroLys, (+)pinanediol ester

N^1-[4-[2-(methoxyaminosulfonyl)phenyl]-2-nitro-benzoyl]boroLys, (+)-pinanediol ester.

Detailed Description of the Invention

Throughout the specification, the following conventional three-letter abbreviations for amino acid residues or amino acids apply:

Ala	=	alanine
Arg	=	arginine
Asn	=	asparagine
Asp	=	aspartic acid
Cys	=	cysteine
Gln	=	glutamine
Glu	=	glutamic acid
Gly	=	glycine
His	=	histidine
Ile	=	isoleucine
Leu	=	leucine
Lys	=	lysine
Met	=	methionine
Phe	=	phenylalanine
Pro	=	proline
Ser	=	serine
Thr	=	threonine
Trp	=	tryptophan
Tyr	=	tyrosine
Val	=	valine
Irg	=	arginine where the guanidine is replaced with an isothiouronium (-SC(=NH)NH_2)
Arg(Me)	=	arginine with the guanidino group methylated
MPG	=	5-methoxy-propylglycine

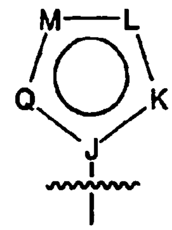
ACA = 3-(4-amino)cyclohexylalanine

The prefix "boro" indicates amino acid residues where the carboxy group is replaced by a boronic acid (Formula I, Y^1 and Y^2 = -OH).

The pinanediol boronic acid ester and the pinacol boronic acid ester are abbreviated "-$C_{10}H_{16}$-" and -C_6H_{12}-" respectively. Other illustrations of diols useful for deriving a boronic acid orthoesters are 1,2-ethanediol, 1,3-propanediol, 1,2-propanediol, 2,3-butanediol, 1,2-diisopropylethanediol, 5,6-decanediol, 1,2-dicyclohexylethanediol.

The formamidino modified amino group is abbreviated (CH=NH). For example, the formamidino analog of -boroOrn-OH {-NH-CH[$(CH_2)_3$-NH-CH(NH)H]B$(OH)_2$ }is -boroOrn(CH=NH)-OH. Analogs containing sidechain substituents are described by indicating the substituent in parenthesis following the name of the parent residue. For example the analog of boroPhenylalanine containing a *meta* cyano group is -boroPhe(*m*CN)-. N-alkyl substituents on the guanidino group of boroArg- or on the isothiouronium analogs (boroIrg) are also put in parenthesis in a similar manner.

Other abbreviations are: Z, benzyloxycarbonyl; BSA, benzene sulfonic acid; THF, tetrahydrofuran; Boc-, t-butoxycarbonyl-; Ac-, acetyl; pNA, *p*-nitro-aniline; DMAP, 4-N,N-dimethylaminopyridine; Tris, Tris(hydroxymethyl)aminomethane; MS, mass spectrometry; FAB/MS, fast atom bombardment mass spectrometry. LRMS(NH_3-CI) and HRMS(NH_3-CI) are low and high resolution mass spectrometry, respectively, using NH_3 as an ion source



As used herein, the structure ,wherein J is N or C and K, L, M and Q are independently selected at each occurrence from the group consisting of N, CR^{13}, S or O, provided that:

i) there may be only one S or O present in the ring at a time;

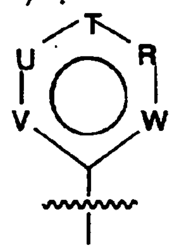
ii) there may only be 1-2 N present when there is an O or S present;

iii) there may be only 1-4 N present;

is used as a substituent definition for R^1. This substituent may be exemplified by the following structures where -J-K-L-M-Q- is:

1) $-N-C(R^{13})=C(R^{13})-C(R^{13})=C(R^{13})-$,
2) $-N-C(R^{13})=C(R^{13})-C(R^{13})=N-$,
3) $-N-C(R^{13})=C(R^{13})-N=C(R^{13})-$,
4) $-N-C(R^{13})=N-C(R^{13})=N-$,
5) $-N-C(R^{13})=C(R^{13})-N=N-$
6) $-N-C(R^{13})=N-N=N-$,
7) $-N-N=C(R^{13})-N=N-$,
8) $=C-O-C(R^{13})=N-C(R^{13})=$,
9) $-C=C(R^{13})-O-C(R^{13})=N-$,
10) $=C-O-C(R^{13})=C(R^{13})-N=$,
11) $-C=C(R^{13})-C(R^{13})=N-O-$,
12) $=C-C(R^{13})=C(R^{13})-O-N=$,
13) $-C=C(R^{13})-O-N=C(R^{13})-$,
14) $=C-S-C(R^{13})=N-C(R^{13})=$,
15) $-C=C(R^{13})-S-C(R^{13})=N-$,
16) $=C-S-C(R^{13})=C(R^{13})-N=$,
17) $-C=N-S-N=C(R^{13})-$,

18) -C=N-S-C(R^{13})=N-,
19) =C-S-N=C(R^{13})-N=,
20) =C-S-C(R^{13})=C(R^{13})-C(R^{13})=,
21) -C=C(R^{13})-S-C(R^{13})=C(R^{13})-,
22) =C-O-C(R^{13})=C(R^{13})-C(R^{13})=, or
23) -C=C(R^{13})-O-C(R^{13})=C(R^{13})-.



As used herein, the structure , wherein in W, R, T, U and V are independently selected at each occurrence from the group consiting of: CR^{13} or N, provided that there may be only 1-3 N present, is used as a substituent definition for R^1. This substituent may be exemplified by the following structures where -C-W-R-T-U-V- is:

1) -C=N-C(R^{13})=C(R^{13})-C(R^{13})=C(R^{13})-,
2) -C=C(R^{13})-N=C(R^{13})-C(R^{13})=C(R^{13})-,
3) -C=C(R^{13})-C(R^{13})=N-C(R^{13})=C(R^{13})-,
4) -C=N-N=C(R^{13})-C(R^{13})=C(R^{13})-,
5) -C=C(R^{13})-N=N-C(R^{13})=C(R^{13})-,
6) -C=N-C(R^{13})=C(R^{13})-C(R^{13})=N-,
7) -C=N-C(R^{13})=C(R^{13})-N=C(R^{13})-,
8) -C=N-C(R^{13})=N-C(R^{13})=C(R^{13})-,
9) -C=C(R^{13})-N=C(R^{13})-N=C(R^{13})-,
10) -C=N-C(R^{13})=N-N=C(R^{13})-,
11) -C=N-C(R^{13})=C(R^{13})-N=N-, or
12) -C=C(R^{13})-N=C(R^{13})-N=N-.

"Amino acid residues" as used herein, refers to natural or unnatural amino acids of either D- or L-configuration. Natural amino acids residues are Ala, Arg, Asn, Asp, Aze, Cys, Gln, Glu, Gly, His, Ile, Irg

Leu, Lys, Met, Orn, Phe, Phe(4-fluoro), Pro, Sar, Ser, Thr, Trp, Tyr, and Val. Roberts and Vellaccio, The Peptides, Vol 5; 341-449 (1983), Academic Press, New York, discloses numerous suitable unnatural amino acids and is incorporated herein by reference for that purpose.

"Amino acids residues" also refers to various amino acids where sidechain functional groups are coupled with appropriate protecting groups known to those skilled in the art. "The Peptides", Vol 3, 3-88 (1981) discloses numerous suitable protecting groups and is incorporated herein by reference for that purpose.

The reactions of the synthetic methods claimed herein are carried out in suitable solvents which may be readily selected by one of skill in the art of organic synthesis, said suitable solvents generally being any solvent which is substantially nonreactive with the starting materials (reactants), the intermediates, or products at the temperatures at which the reactions are carried out, i.e., temperatures which may range from the solvent's freezing temperature to the solvent's boiling temperature. A given reaction may be carried out in one solvent or a mixture of more than one solvent. Depending on the particular reaction step, suitable solvents for a particular reaction step may be selected.

The compounds herein described may have asymmetric centers. All chiral, diastereomeric, and racemic forms are included in the present invention. Many geometric isomers of olefins, C=N double bonds, and the like can also be present in the compounds described herein, and all such stable isomers are contemplated in the present invention. It will be appreciated that certain compounds of the present invention contain an asymmetrically substituted carbon atom, and may be isolated in optically active or racemic forms. It is well known in the art how to prepare optically active

forms, such as by resolution of racemic forms or by synthesis, from optically active starting materials. Also, it is realized that cis and trans geometric isomers of the compounds of the present invention are described and may be isolated as a mixture of isomers or as separated isomeric forms. All chiral, diastereomeric, racemic forms and all geometric isomeric forms of a structure are intended, unless the specific stereochemistry or isomer form is specifically indicated.

When any variable (for example, R^1 through R^{20}, R^{20a}, m, n, D, E, F, W, X, etc.) occurs more than one time in any constituent or in Formula (I), its definition on each occurrence is independent of its definition at every other occurrence. Thus, for example, if a group is shown to be substituted with 0-3 R^{11}, then said group may optionally be substituted with up to three R^{11} and R^{11} at each occurrence is selected independently from the defined list of possible R^{11}. Also, for example, in $-N(R^{15})_2$, each of the R^{15} substituents may be independently selected from the list of possible R^{20} groups defined. Also, combinations of substituents and/or variables are permissible only if such combinations result in stable compounds. Similarly, by way of example, for the group $-C(R^{11})_2-$, each of the two R^{11} substituents on C is independently selected from the defined list of possible R^{11}.

As used herein, "alkyl" is intended to include both branched and straight-chain saturated aliphatic hydrocarbon groups having the specified number of carbon atoms; "haloalkyl" is intended to include both branched and straight-chain saturated aliphatic hydrocarbon groups having the specified number of carbon atoms, substituted with 1 or more halogen (for example $-C_vF_w$ where v = 1 to 3 and w = 1 to (2v+1)); "alkoxy" represents an alkyl group of indicated number of carbon

atoms attached through an oxygen bridge; "cycloalkyl" is intended to include saturated ring groups, including mono-,bi- or poly-cyclic ring systems, such as cyclopropyl, cyclobutyl, cyclopentyl, cyclohexyl, cycloheptyl, adamantyl and cyclooctyl; and "biycloalkyl" is intended to include saturated bicyclic ring groups such as [3.3.0]bicyclooctane, [4.3.0]bicyclononane, [4.4.0]bicyclodecane (decalin), [2.2.2]bicyclooctane, and so forth. "Alkenyl" is intended to include hydrocarbon chains of either a straight or branched configuration and one or more unsaturated carbon-carbon bonds which may occur in any stable point along the chain, such as ethenyl, propenyl, and the like; and "alkynyl" is intended to include hydrocarbon chains of either a straight or branched configuration and one or more triple carbon-carbon bonds which may occur in any stable point along the chain, such as ethynyl, propynyl and the like.

"Halo" or "halogen" as used herein refers to fluoro, chloro, bromo, and iodo; and "counterion" is used to represent a small, negatively charged species such as chloride, bromide, hydroxide, acetate, sulfate, and the like.

As used herein, "aryl" or "aromatic residue" is intended to mean phenyl or naphthyl; the term "arylalkyl" represents an aryl group attached through an alkyl bridge. By way of examples: the term "C_7-C_{10} arylalkyl" is intended to refer to an aryl group attached through a C_1-C_4 alkyl bridge to the residue of the indicated compound; the term "(C_1-C_3 alkyl)aryl" is intended to refer to a C_1-C_3 alkyl group which is attached through an aryl ring to the residue of the indicated compound; the term "aryl(C_1-C_3 alkyl)" is intended to refer to an aryl group attached through a C_1-C_3 alkyl group to the residue of the indicated compound.

As used herein, "carbocycle" or "carbocyclic residue" is intended to mean any stable 3- to 8-membered monocyclic or bicyclic or 7- to 14-membered bicyclic or tricyclic or an up to 26-membered polycyclic carbon ring, any of which may be saturated, partially unsaturated, or aromatic. Examples of such carbocyles include, but are not limited to, cyclopropyl, cyclopentyl, cyclohexyl, phenyl, biphenyl, naphthyl, indanyl, adamantyl, or tetrahydronaphthyl (tetralin).

As used herein, the term "heterocycle" is intended to mean a stable 5- to 7- membered monocyclic or bicyclic or 7- to 10-membered bicyclic heterocyclic ring which is saturated and consists of carbon atoms and from 1 to 4 heteroatoms independently selected from the group consisting of N, O and S and wherein the nitrogen and sulfur heteroatoms may optionally be oxidized, and the nitrogen may optionally be quaternized, and including any bicyclic group in which any of the above-defined heterocyclic rings is fused to a benzene ring. The heterocyclic ring may be attached to its pendant group at any heteroatom or carbon atom which results in a stable structure. The term "heteroaryl" is intended to mean an aromatic form of a heterocyclic ring. Unless otherwise specified, the heterocyclic and heteroaryl rings described herein may be substituted on carbon or on a nitrogen atom if the resulting compound is stable. Unless otherwise specified, examples of such heterocycles include, but are not limited to, pyridinyl, pyrimidinyl, furanyl, thienyl, pyrrolyl, pyrazolyl, imidazolyl, tetrazolyl, benzofuranyl, benzothiophenyl, indolyl, indolenyl, quinolinyl, isoquinolinyl, benzimidazolyl, piperidinyl, 4-piperidonyl, pyrrolidinyl, 2-pyrrolidonyl, pyrrolinyl, tetrahydrofuranyl, tetrahydroquinolinyl, tetrahydroisoquinolinyl, decahydroquinolinyl or octahydroisoquinolinyl, azocinyl, triazinyl, 6*H*-1,2,5-

thiadiazinyl, 2*H*,6*H*-1,5,2-dithiazinyl, thiophenyl, thianthrenyl, pyranyl, isobenzofuranyl, chromenyl, xanthenyl, phenoxathiinyl, 2*H*-pyrrolyl, isothiazolyl, isoxazolyl, pyrazinyl, pyridazinyl, indolizinyl, isoindolyl, 3*H*-indolyl, 1*H*-indazolyl, purinyl, 4*H*-quinolizinyl, phthalazinyl, naphthyridinyl, quinoxalinyl, quinazolinyl, cinnolinyl, pteridinyl, 4a*H*-carbazolyl, carbazolyl, ß-carbolinyl, phenanthridinyl, acridinyl, perimidinyl, phenanthrolinyl, phenazinyl, phenarsazinyl, phenothiazinyl, furazanyl, phenoxazinyl, isochromanyl, chromanyl, imidazolidinyl, imidazolinyl, pyrazolidinyl, pyrazolinyl, piperazinyl, indolinyl, isoindolinyl, quinuclidinyl, morpholinyl, oxazolidinyl, benzotriazolyl, benzisoxazolyl, oxindolyl, benzoxazolinyl, or isatinoyl. Also included are fused ring and spiro compounds containing, for example, the above heterocycles.

When a bond to a substituent is shown to cross the bond connecting two atoms in a ring, then such substituent may be bonded to any atom on the ring. When a substituent is listed without indicating the atom via which such substituent is bonded to the rest of the compound of formula I, then such substituent may be bonded via any atom in such substituent. For example, when the substituent is piperazinyl, piperidinyl, or tetrazolyl, unless specified otherwise, said piperazinyl, piperidinyl, tetrazolyl group may be bonded to the rest of the compound of formula (I) via any atom in such piperazinyl, piperidinyl, tetrazolyl group.

Combinations of substituents and/or variables are permissible only if such combinations result in stable compounds. By stable compound or stable structure it is meant herein a compound that is sufficiently robust to survive isolation to a useful degree of purity from a

reaction mixture, and formulation into an efficacious therapeutic agent.

The term "substituted", as used herein, means that an one or more hydrogen on the designated atom is replaced with a selection from the indicated group, provided that the designated atom's normal valency is not exceeded, and that the substitution results in a stable compound. When a substitent is keto (i.e., =O), then 2 hydrogens on the atom are replaced.

As used herein, the term "any group that, when administered to a mammalian subject, cleaves to form a free hydroxyl, amino or sulfhydryl" means any group bonded to an O, N, or S atom, respectively, which is cleaved from the O, N, or S atom when the compound is administered to a mammalian subject to provide a compound having a remaining free hydroxyl, amino, or sulfhydryl group, respectively. Examples of groups that, when administered to a mammalian subject, are cleaved to form a free hydroxyl, amino or sulfhydryl, include but are not limited to, phosphate esters, C_1-C_6 alkyl substituted with 0-3 R^{11}, C_3-C_6 alkoxyalkyl substituted with 0-3 R^{11}, C_1-C_6 alkylcarbonyl substituted with 0-3 R^{11}, C_1-C_6 ålkoxycarbonyl substituted with 0-3 R^{11}, C_1-C_6 alkylaminocarbonyl substituted with 0-3 R^{11}, benzoyl substituted with 0-3 R^{12}, phenoxycarbonyl substituted with 0-3 R^{12}, phenylaminocarbonyl substituted with 0-3 R^{12}, or heteroarylcarbonyl. Examples of groups that, when administered to a mammalian subject, are cleaved to form a free hydroxyl, amino or sulfhydryl, may include hydroxy, amine or sulfhydryl protecting groups, respectively.

As used herein, the term "amine protecting group" means any group known in the art of organic synthesis for the protection of amine groups. Such amine protecting groups include those listed in Greene and

Wuts, "Protective Groups in Organic Synthesis" John Wiley & Sons, New York (1991) and "The Peptides: Analysis, Synthesis, Biology, Vol. 3, Academic Press, New York (1981), the disclosure of which is hereby incorporated by reference. Any amine protecting group known in the art can be used. Examples of amine protecting groups include, but are not limited to, the following: 1) acyl types such as formyl, trifluoroacetyl, phthalyl, and p-toluenesulfonyl; 2) aromatic carbamate types such as benzyloxycarbonyl (Cbz) and substituted benzyloxycarbonyls, 1-(p-biphenyl)-1-methylethoxycarbonyl, and 9-fluorenylmethoxycarbonyl (Fmoc); 3) aliphatic carbamate types such as tert-butyloxycarbonyl (Boc), ethoxycarbonyl, diisopropylmethoxycarbonyl, and allyloxycarbonyl; 4) cyclic alkyl carbamate types such as cyclopentyloxycarbonyl and adamantyloxycarbonyl; 5) alkyl types such as triphenylmethyl and benzyl; 6) trialkylsilane such as trimethylsilane; and 7) thiol containing types such as phenylthiocarbonyl and dithiasuccinoyl.

The term "amino acid" as used herein means an organic compound containing both a basic amino group and an acidic carboxyl group. Included within this term are natural amino acids, modified and unusual amino acids, as well as amino acids which are known to occur biologically in free or combined form but usually do not occur in proteins. Included within this term are modified and unusual amino acids,such as those disclosed in, for example, Roberts and Vellaccio (1983) The Peptides, 5: 342-429, the teaching of which is hereby incorporated by reference. Modified or unusual amino acids which can be used to practice the invention include, but are not limited to, D-amino acids, hydroxylysine, 4-hydroxyproline, an N-Cbz-protected amino acid, ornithine, 2,4-diaminobutyric acid,

homoarginine, norleucine, N-methylaminobutyric acid, naphthylalanine, phenylglycine, ß-phenylproline, tert-leucine, 4-aminocyclohexylalanine, N-methylnorleucine, 3,4-dehydroproline, N,N-dimethylaminoglycine, N-methylaminoglycine, 4-aminopiperidine-4-carboxylic acid, 6-aminocaproic acid, trans-4-(aminomethyl)-cyclohexanecarboxylic acid, 2-, 3-, and 4-(aminomethyl)-benzoic acid, 1-aminocyclopentanecarboxylic acid, 1-aminocyclopropanecarboxylic acid, and 2-benzyl-5-aminopentanoic acid.

The term "peptide" as used herein means a compound that consists of two or more amino acids (as defined herein) that are linked by means of a peptide bond. The term "peptide" also includes compounds containing both peptide and non-peptide components, such as pseudopeptide or peptide mimetic residues or other non-amino acid components. Such a compound containing both peptide and non-peptide components may also be referred to as a "peptide analog".

The term "peptide bond" means a covalent amide linkage formed by loss of a molecule of water between the carboxyl group of one amino acid and the amino group of a second amino acid.

As used herein, "pharmaceutically acceptable salts" refer to derivatives of the disclosed compounds wherein the parent compound of formula (I) is modified by making acid or base salts of the compound of formula (I). Examples of pharmaceutically acceptable salts include, but are not limited to, mineral or organic acid salts of basic residues such as amines; alkali or organic salts of acidic residues such as carboxylic acids; and the like.

"Prodrugs" are considered to be any covalently bonded carriers which release the active parent drug according to formula (I) *in vivo* when such prodrug is

administered to a mammalian subject. Prodrugs of the compounds of formula (I) are prepared by modifying functional groups present in the compounds in such a way that the modifications are cleaved, either in routine manipulation or *in vivo*, to the parent compounds. Prodrugs include compounds of formula (I) wherein hydroxy, amine, or sulfhydryl groups are bonded to any group that, when administered to a mammalian subject, cleaves to form a free hydroxyl, amino, or sulfhydryl group, respectively. Examples of prodrugs include, but are not limited to, acetate, formate, or benzoate derivatives of alcohol and amine functional groups in the compounds of formula (I); phosphate esters, dimethylglycine esters, aminoalkylbenzyl esters, aminoalkyl esters and carboxyalkyl esters of alcohol and phenol functional groups in the compounds of formula (I); and the like.

The pharmaceutically acceptable salts of the compounds of formula (I) include the conventional non-toxic salts or the quaternary ammonium salts of the compounds of formula (I) formed, for example, from non-toxic inorganic or organic acids. For example, such conventional non-toxic salts include those derived from inorganic acids such as hydrochloric, hydrobromic, sulfuric, sulfamic, phosphoric, nitric and the like; and the salts prepared from organic acids such as acetic, propionic, succinic, glycolic, stearic, lactic, malic, tartaric, citric, ascorbic, pamoic, maleic, hydroxymaleic, phenylacetic, glutamic, benzoic, salicylic, sulfanilic, 2-acetoxybenzoic, fumaric, toluenesulfonic, methanesulfonic, ethane disulfonic, oxalic, isethionic, and the like.

The pharmaceutically acceptable salts of the present invention can be synthesized from the compounds of formula (I) which contain a basic or acidic moiety by conventional chemical methods. Generally, such salts

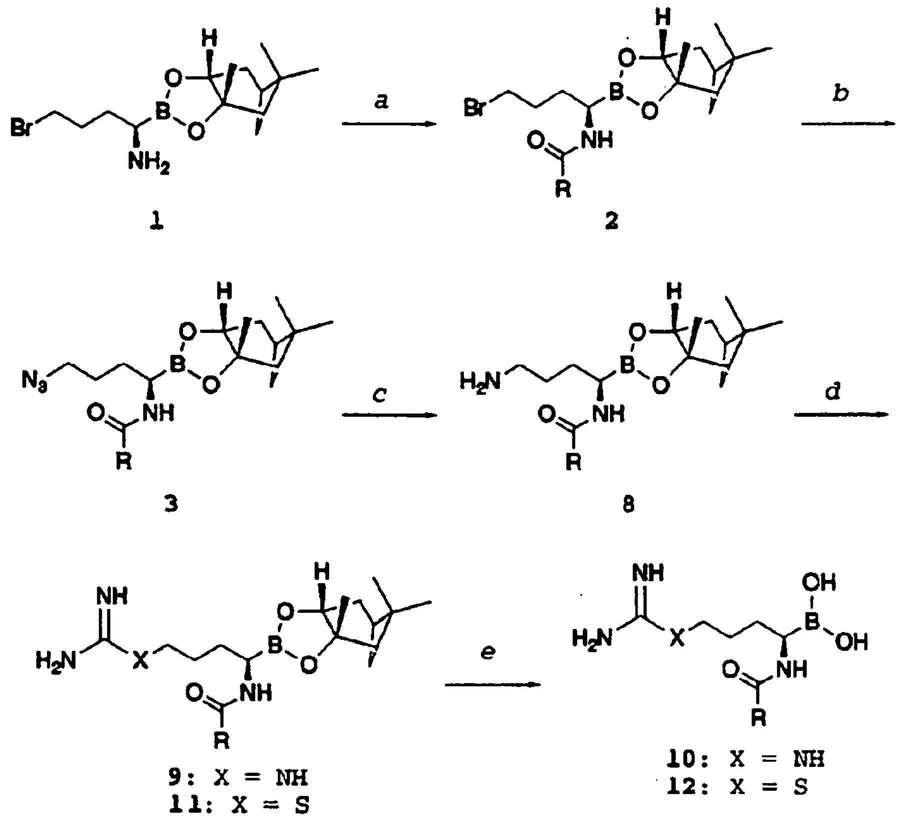
can be prepared by reacting the free acid or base forms of these compounds with a stoichiometric amount of the appropriate base or acid in water or in an organic solvent, or in a mixture of the two; generally, nonaqueous media like ether, ethyl acetate, ethanol, isopropanol, or acetonitrile are preferred. Lists of suitable salts are found in Remington's Pharmaceutical Sciences, 17th ed., Mack Publishing Company, Easton, PA, 1985, p. 1418, the disclosure of which is hereby incorporated by reference.

The disclosures of all of the references cited herein are hereby incorporated herein by reference in their entirety.

Synthesis

The compounds of formula (I) can be prepared using the reactions and techniques described below. The reactions are performed in a solvent appropriate to the reagents and materials employed and suitable for the transformations being affected. It will be understood by those skilled in the art of organic synthesis that the functionality present on the molecule should be consistent with the chemical transformations proposed and this will sometimes require judgment as to the order of synthetic steps or selection of particular process scheme used from that shown below in order to obtain a desired compound of the invention.

Scheme 1. Synthesis of Thrombin Inhibitors



Reagents: *a*. IBCF, NMM, RCO_2H, Et_3N, 0 °C, *b*. NaN_3, *c*. H_2, $Pd(OH)_2/C$, HCl, *d*. DMAP, aminoiminomethanesulfonic acid, *e*. phenylboronic acid

Amine hydrochloride **1** is readily available *via* the procedure of Kettner and Shenvi (EP 0293881 A2).

There are numerous synthetic methods by which to prepare amide **2**, however, competing with amide formation is the cyclization of **1** to afford a complex mixture containing the desired amide and the corresponding *N*-acylboroproline. Since purification at this stage is unfeasible, choosing the correct method for amide formation is crucial to obtaining **2** in a purity suitable for subsequent synthetic transformations.

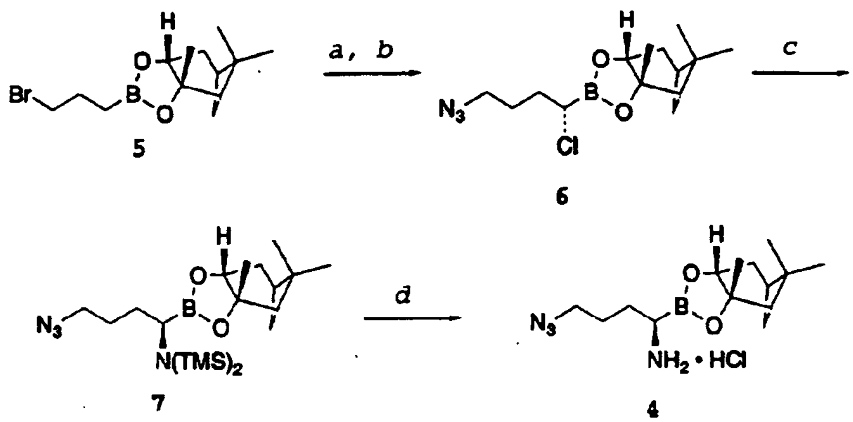
Three methods are preferred for the preparation of **2**. In the first, a solution of **1** in tetrahydrofuran or dichloromethane at 0 °C is treated sequentially with the desired acid chloride followed by two equivalents of triethylamine. The mixture is then allowed to warm to room temperature overnight. The second method is the mixed anhydride procedure of Anderson, et. al. (*J. Am. Chem. Soc.* **1967**, *89*, 5012). In this method the isobutyl mixed anhydride is generated by dissolving the carboxylic acid component in tetrahydrofuran and adding one equivalent of *N*-methylmorpholine. The solution is cooled to 0 °C and one equivalent of isobutyl chloroformate is added. After 5 minutes, a solution of **1** in chloroform is added, followed by the addition of one equivalent of triethylamine. The mixture is typically stirred at 0 °C for one hour followed by one to several hours at room temperature. The third method for amide formation is the hydroxybenzotriazole/DCC method of König and Geiger (*Chem. Ber.* **1970**, *103*, 788-98). Thus, to a solution of **1** and the carboxylic acid component in dimethylformamide or tetrahydrofuran at 0 °C is added *N*-methylmorpholine, 1-hydroxybenzotriazole hydrate (2 eq) and DCC (1.05 eq). The solution is allowed to warm to room temperature overnight.

The preferred method for the preparation of azide **3** is by reaction of **2** with sodium azide (1.1 eq) in dimethylformamide at 70 °C for 2 hours.

The azide displacement may also be performed prior to amide formation. This is the preferred method in cases where the rate of amide formation is slow relative to the rate of cyclization. Azide **4** is prepared by a modification of the procedure of Kettner and Shenvi (EP 0293881 A2) as shown in Scheme 2. Thus, bromide **5** is reacted with sodium azide, followed by homologation to give **6**, chloride displacement to afford **7** and acidic

hydrolysis to give **4**. Amide formation between **4** and the carboxylic acid component then affords 3 directly.

Scheme 2. Synthesis of Azide **4**



Reagents: *a.* NaN_3 *b.* $CHCl_2Li$, $ZnCl_2$, *c.* $LiN(TMS)_2$, *d.* 4M HCl, dioxane

Reduction of azide 3 to amine **8** may be accomplished by hydrogenation over precious metal catalysts. The preferred catalyst for this transformation is Pearlman's catalyst (palladium hydroxide on carbon). The amine is typically isolated as the hydrochloride salt. Isolation of **8** as the free base typically results in lowered yields. Salts of **8** which may confer superior physical properties may be preferred over the hydrochloride salt.

Formamidination of amine **8** may be accomplished using cyanamide. Due to the low reactivity of amine **8**, however, the preferred method for this transformation is reaction with 4-dimethylamin-opyridine (DMAP) and aminoiminomethanesulfonic acid (AMSA, prepared by the method of Kim, et. al., *Tetrahedron Lett*. **1988**, *29*, 3183-6). This affords guanidine **9**, which is isolated as the bisulfite or hydrochloride salt.

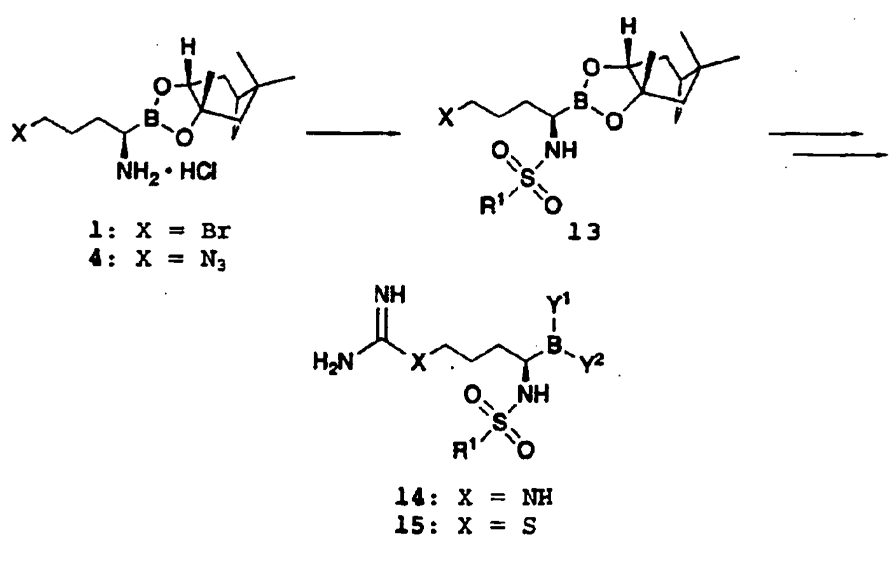
Cleavage of pinanediol ester **9** may be accomplished using anhydrous boron trichloride according to the

procedure of Matteson and Ray (*J. Am. Chem. Soc.* **1980**, *102*, 7588). This method, however, is strongly Lewis acidic and leads to partial destruction of the substrate. The preferred method for water soluble boronic acids is a transesterification reaction that is run in the presence of excess phenylboronic acid. The free boronic acid **10** may then be isolated using cation exchange chromatography.

The isothiouronium functionalized analogs **11/12** are prepared from bromide **2** according to the procedure of Kettner and Shenvi (EP 0293881 A2).

Inhibitors containing a sulfonamide in place of a carboxamide are prepared from either **1** or **4** by reaction with a sulfonyl chloride in the presence of a hindered amine (Scheme 3). The product sulfonamide **13** is then converted to the guanidinium **14** or isothiouronium **15** in the same manner as the corresponding carboxamides.

Scheme 3. Synthesis of Sulfonamides



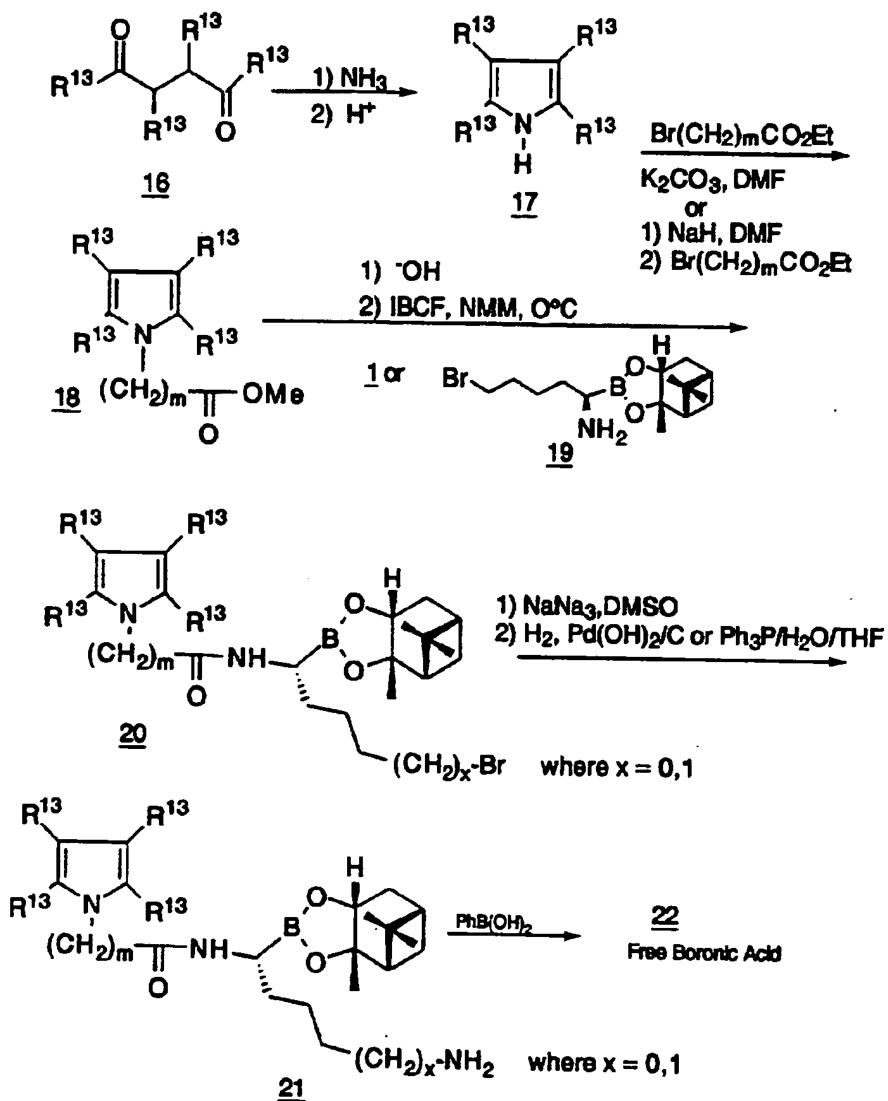
Inhibitors containing the borolysine moiety are prepared analogously to those containing boroarginine according to Kettner and Shenvi (EP 0293881 A2).

Novel biaryls synthesized in this invention are prepared through palladium catalyzed coupling of an appropriate arylmetal species to the aryl halide of choice using the methods described in Negishi, et. al., *Org. Synth.* **1987**, *66*, 67-74, and references cited within.

Synthetic approaches toward construction of pyrroles are numerous: R. J. Sundberg in "Comprehensive Heterocyclic Chemistry", A. R. Katritzky (Ed.), Pergamon Press, New York (1984), Vol. 4, p. 705; Synthesis, 1946, 281. The following discussion is restricted to the most common and reliable methods towards the synthesis of pyrroles within the general scope of the invention.

Compounds where R^1 is a pyrrole can be synthesized as shown on Scheme 4.

Scheme 4



Starting material diketone 16 may or may not have its substituents R^{13-16} in final form as defined in the scope. These substituents might be in protected forms or in the form of suitable precursors which make the heterocyclic portion, for example, amenable to synthesis. These precursor forms can then be converted to their final forms later on in the synthesis using procedures familiar to one skilled in the art.

The cyclization condensation of 1,4-dicarbonyl compounds with ammonia, primary amines or related compounds, the Paal-Knorr reaction, is one of the most general and widely applicable pyrrole syntheses, R. A. Jones and G. P. Bean, "The Chemistry of Pyrroles", Academic Press, London, 1977; p. 77-81. The generality of this approach is primarily determined by the availability of the dicarbonyl precursors, 16, as illustrated by Scheme 4. By heating such diketones with ammonia or amines in a solvent like benzene, toluene or methylene chloride with a catalyst such as sulfuric acid, acetic acid, p-toluenesulfonic acid, alumina or even titanium tetrachloride, pyrroles like 17 may be prepared.

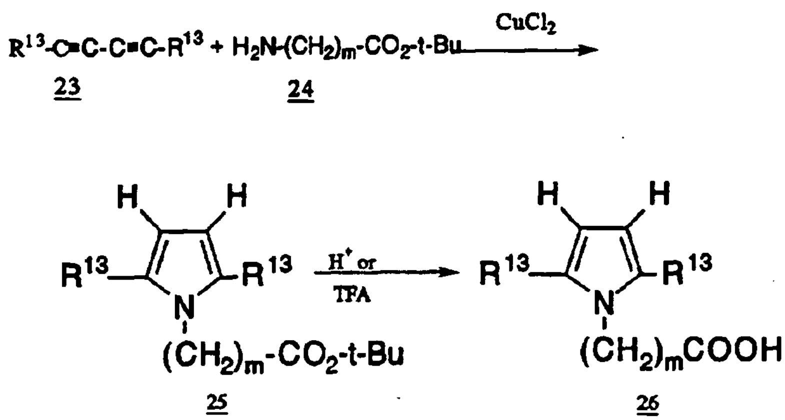
Subsequent alkylation of pyrrole 17 with a bromoester, for example, leads to the alkylated heterocycle 18. Alkylation conditions include either first deprotonating with NaH or KH in DMF followed by addition of the alkylating agent or simply stirring the heterocycle with the alkylating agent in an inert solvent such as DMF or DMSO at 0°C to 100°C in the presence of an acid scavenger such as K_2CO_3.

Saponification of ester 18 followed by coupling aminoboronic ester 1 or 19 as discussed previously yields compound 20. This bromide may be either elaborated to the lysine side-chain 21 (X=1) or if X=O, into the corresponding ornithine side-chain or any other side-chain discussed previously. Subsequent hydrolysis of the boronic ester yields the boronic acid as discussed previously too.

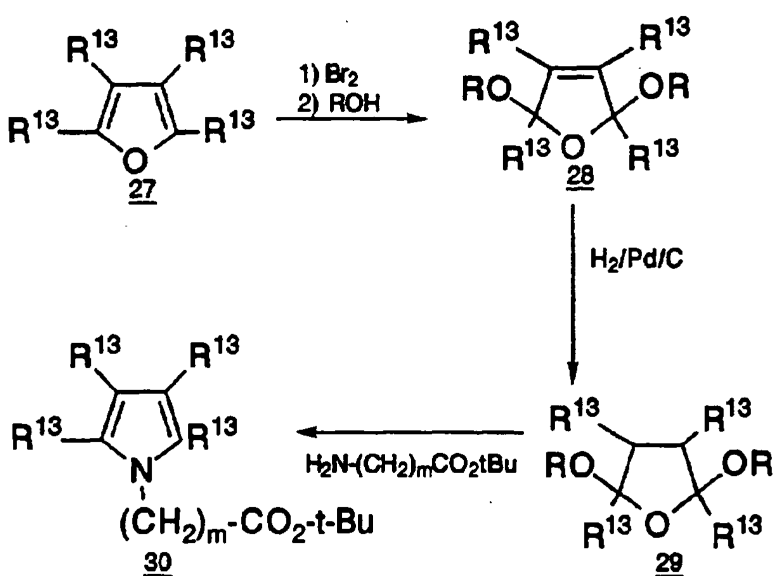
The cyclization of diynes 23 with amines has been reported and an adaptation of this method is shown in Scheme 5 (K. E. Schulte et al., Chem. Ber (1965) 98 ; A. J. Chalk Tet. Lett. (1972) 3487). The diynes are made via transition metal catalyzed coupling of alkynes,

i.e., the Cadio-Chodkiewicz reaction (W. Chodkiewicz Ann. Chim. (Paris) (1957) 2 81g).

Scheme 5



Scheme 6

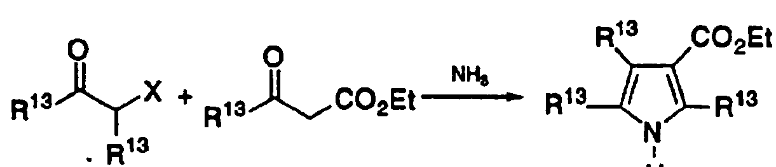


Furans (27) have been converted directly to pyrroles by treatment with amines but the harsh conditions required (400°C/Al_2O_3) precludes its generality. 2,5-Dialkoxytetrahydrofurans (29) have been more commonly

employed as furan (or 1,4-dicarbonyl) equivalents and react readily with aliphatic or aromatic amines (and even weakly nucleophilic sulfonamides) to give pyrroles as shown in Scheme 6 , J. W. F. Wasley and K. Chan, Synth. Commun. 3, 303 (1973). Although commercially available 2,5-dialkoxytetrahydrofurans (29) (R^1=R^2=H))generally restrict one to preparing 1-substituted pyrroles, more highly substituted systems may be obtained by a three-step alcoholysis of the appropriate furans (27) to the more highly substituted 2,5-dialkoxytetrahydrofurans (29) as shown in Scheme 6, N. L. Weinberg and H. R. Weinberg, Chem. Rev., 68, 449 (1968); N. Elming, Adv. Org. chem., 2, 67 (1960).

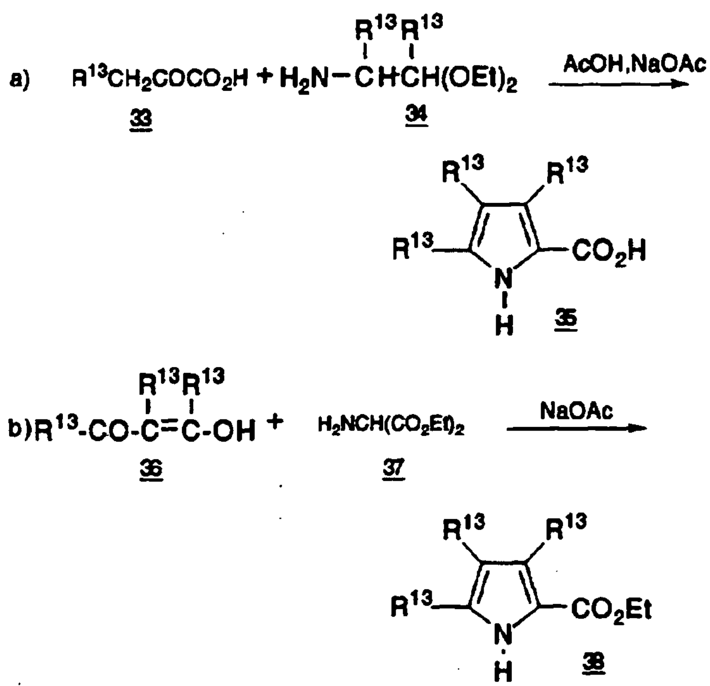
The Hantzsch synthesis utilizes the condensation of ß-haloketones (30a) and ß-ketoesters (31) in the presence of ammonia or a primary amine to give pyrroles such as (32), as shown in Scheme 7, A. Hantzsch, Chem. Ber., 23, 1474 (1980); D. C. von Beelen, J. Walters, and S. von der Gen, Rec Trav. Chem. 98, 437 (1979). Among the numerous modifications reported over the years, the substitution of (30a) with the readily available α-hydroxyaldehydes or nitroalkenes has expanded the versatility and generality of this important method, D. M. McKinnon, Can. J. Chem. 43, 2628 (1965); H. George and H. J. Roth, Arch. Pharm. 307, 699 (1974); C. A. Grok and K. Camenisch, Helv. Chem. Acta, 36, 49 (1953).

Scheme 7



30a 31 32

Scheme 8



The closely related Knorr condensation involves the reaction between amino carbonyl compounds (or their precursors) and carbonyl (or dicarbonyl) compounds, J. M. Patterson, Synthesis, 282 (1976). Representative methods for preparing substituted pyrroles (35 and 38) are shown by Scheme 8, equations a) and b), S. Umio et al., Jap. Pat. 7018653, Fujisawa Pharmaceutical Co., Ltd., 1970 (C. A. 73, 77039, 1970); K. Tanaka, K. Kariyone, S. Umio, Chem. Pharm. Bull. (Tokyo)), 17, 611 (1969).

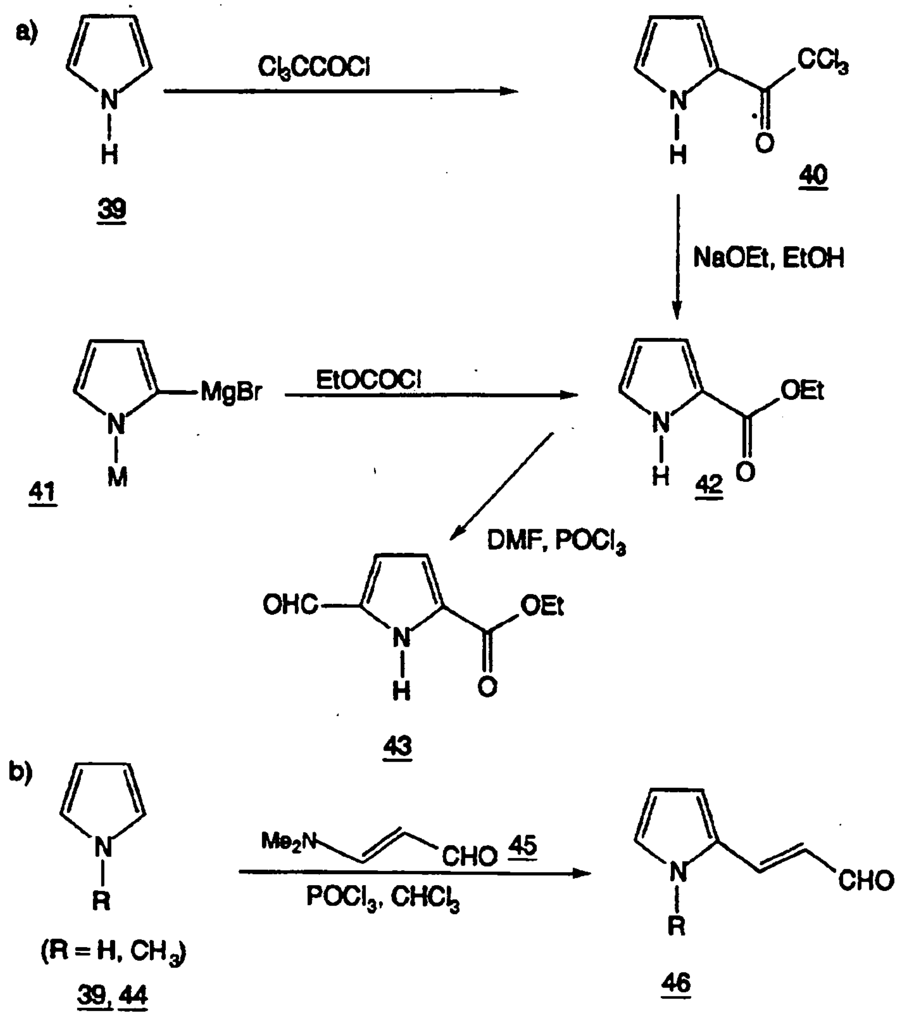
The elaboration of an appropriately functionalized pyrrole is another method for preparing pyrroles of general formula I. Methyl (or ethyl) 5-formyl-1H-pyrrole-2-carboxylate (43) is a particularly useful intermediate with regards to pyrroles claimed in this invention and has been prepared by a number of methods

as shown by Scheme 9, eq. a, W. A. Davies, A. R. Pinder and I. G. Morris, Tetrahedron 18, 405 (1962); Org Syn., vol 36, p. 74; Org. Syn., vol. 51.

More recently, Ullrich has extended the Vilsmeyer-Haack formylation of pyrroles to include vinylogous systems such as (46) by using the 3-(N,N-dimethylformamide derivative, as shown by Scheme 9, eq. b, F. W. Ullrich and E. Breitmaier, Synthesis, 641 (1983); W. Heinz, et al., Tetrahedron, 42, 3753 (1986).

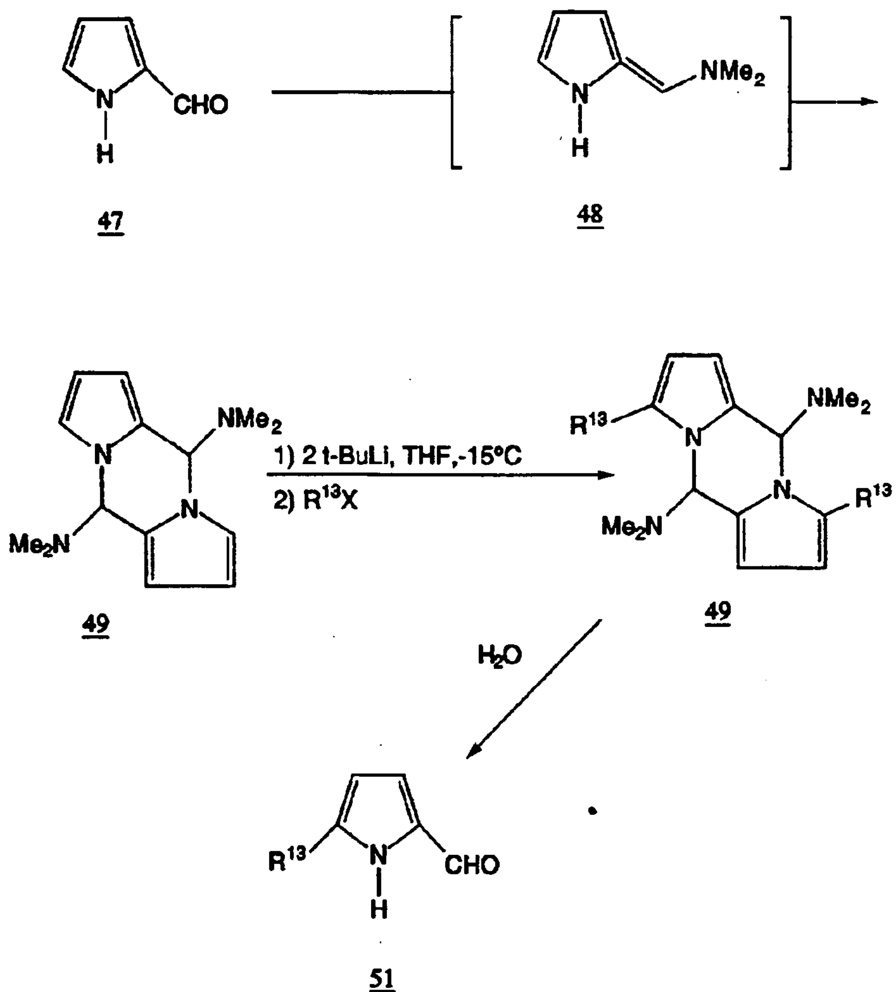
An especially attractive approach to pyrroles claimed in this invention has recently been reported, whereby lithiation of the 6-dimethylamino-1-azafulvene dimer (49) followed by treatment with an appropriate electrophile and subsequent hydrolysis leads to 5-substituted pyrrole-2-carboxaldehydes (51), as illustrated in Scheme 10, J. M. Muchowski and P. Hess, Tetrahedron Lett., 29, 777 (1988). The carboxylic acid, ester and aldehyde side-chains depicted in Schemes 9-10 can be readily converted to R^{13-16} by methods familiar to one skilled in the art.

Scheme 9



a)
Cl_3CCOCl
CCl_3
39
40
NaOEt, EtOH
MgBr
EtOCOCl
OEt
41
42
DMF, $POCl_3$
OHC
43
b)
Me_2N
CHO 45
$POCl_3$, $CHCl_3$
CHO
(R = H, CH_3)
39, 44
46

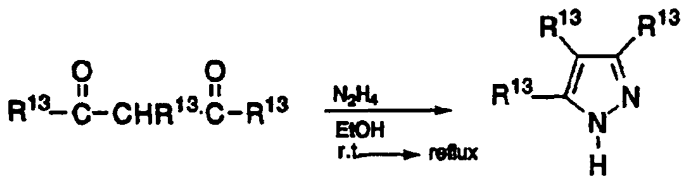
Scheme 10



A general and versatile approach to pyrazoles (R^1=pyrazole) involves condensation of a 1,3-difunctional compound (usually dicarbonyl) with hydrazine or its derivatives, as shown in Scheme 11 for pyrazoles of the formula 53 and reviewed by G. Corspeau and J. Elguerv, Bull. Soc. Chim. Fr., 2717 (1970). Rarely have pyrazoles have been prepared in which the N-N bond is the last step of the ring closure, J. Elguerv in Comprehensive Heterocyclic Chemistry, S. R. Katritzky

(Ed.) Pergamon Press, New York, Vol. 5 (1984), p. 274; J. Barluenga, J. Chem. Soc, Perkin Trans.1, 2275 (1983).

Scheme 11

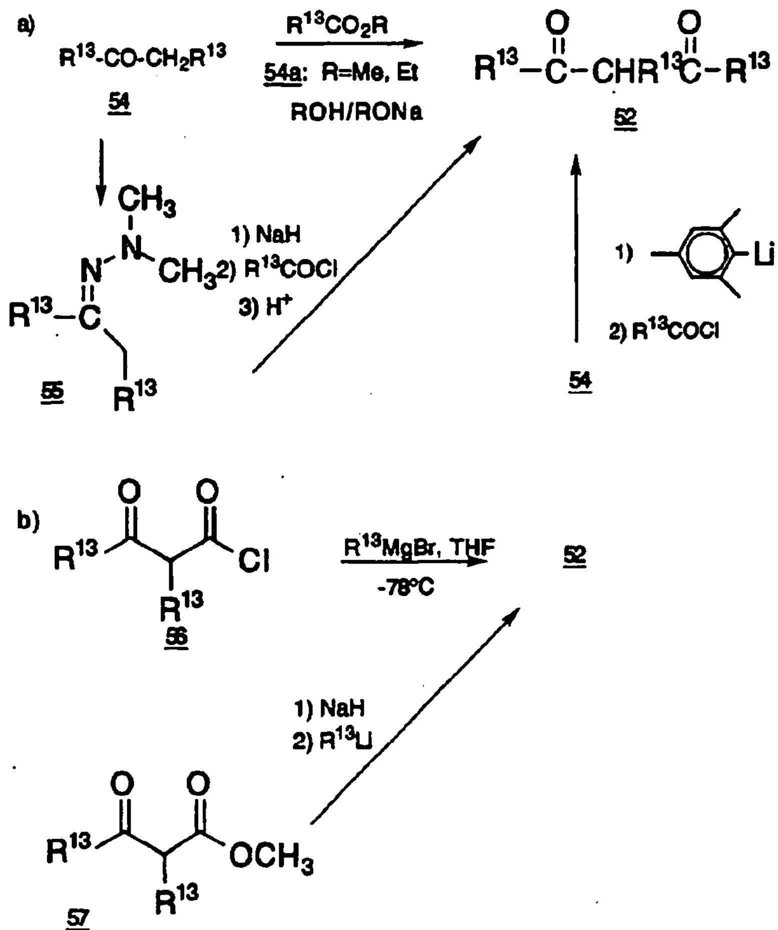


52 53

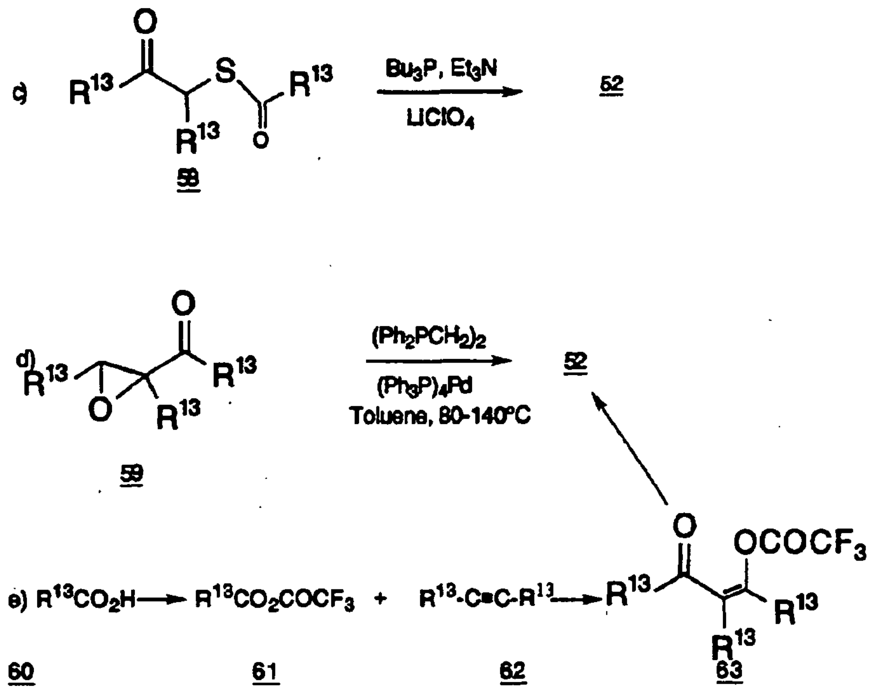
The condensation of 1,3-dicarbonyl compounds with hydrazine hydrate derivatives is generally carried out by admixture of the two components in a suitable solvent like a lower alcohol, ether, or THF at 0°C to the reflux temperature for 1-18 hours.

The synthesis of 1,3-dicarbonyl compounds has received considerable attention in the literature and most of the major approaches towards 1,3-diketones 52 of interest in this invention are illustrated by Scheme 12.

Scheme 12


a)
R^{13}-CO-CH_2R^{13}
54
$R^{13}CO_2R$
54a: R=Me, Et
ROH/RONa
R^{13}-C(=O)-CHR^{13}C(=O)-R^{13}
52
CH_3
N
N
CH_3
R^{13}
C
R^{13}
55
1) NaH
2) $R^{13}COCl$
3) H^+
1)
Li
2) $R^{13}COCl$
54
b)
O
O
R^{13}
Cl
R^{13}
56
$R^{13}MgBr$, THF
-78°C
52
1) NaH
2) $R^{13}Li$
O
O
R^{13}
OCH_3
R^{13}
57

Scheme 12 (cont'd.)



Esters 54a can be reacted with ketones 54 using bases like sodium ethoxide, sodium hydride or sodium amide in a suitable solvent like alcohol, DMF, DMSO or benzene at 0°C to reflux for 4-18 hours with 30-70% efficiency, J. M. Sprague, L. J. Beckham and H. Adkins, J. Amer. Chem. Soc., 56, 2665 (1934). Metallation of hydrazines 55 with n-BuLi followed by reaction with carboxylic acid chlorides and subsequent hydrolysis affords 52, D. Enders and P. Wenster, Tetrahedron Lett., 2853 (1978). Metallation of 54 with the non-nucleophilic mesityl lithium followed by acylation also affords 52, A. K. Beck, M. S. Hoelstein and D. Seebach, Tetrahedron Lett., 1187 (1977); D. Seebach, Tetrahedron Lett., 4839; (1976).

As shown in Scheme 12, equation b, the addition of Grignard reagents to ß-keto carboxylic acid chlorides

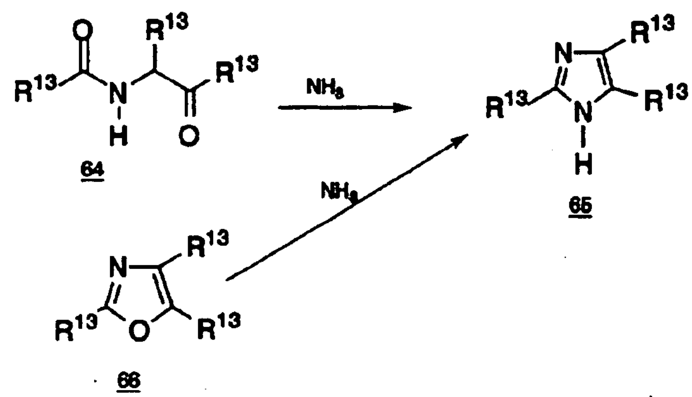
may be limited to monoaddition at low temperatures to provide 52, C. D. Hurd and G. D. Kelso, J. Amer. Amer. Soc. 62, 1548 (1940); F .Sato, M. Trone, K. Oyuro, and M. Sato, Tetrahedron Lett. 4303 (1979). Lithium dialkyl copper reagents (R^2 CuLi) have also been used, Luong-Thi and Riviero, J. Organomet. Chem. 77, C52 (1974). Analogously, addition of alkyllithium reagents ($R^{15}Li$) to the monoanions of ß-keto esters 57 also give rise to 1,3-diketones, S. N. Huckin and L. Weiler, Can. J. Chem. 52, 1379 (1974).

Eschenmoser has demonstrated a synthesis of ß-diketones through a sulfur extrusion reaction of keto thioesters 58 with tributylphosphine, triethylamine and lithium perchlorate, S. Eshenmoser, Helv. Chim. Acta., 54, 710 (1971).

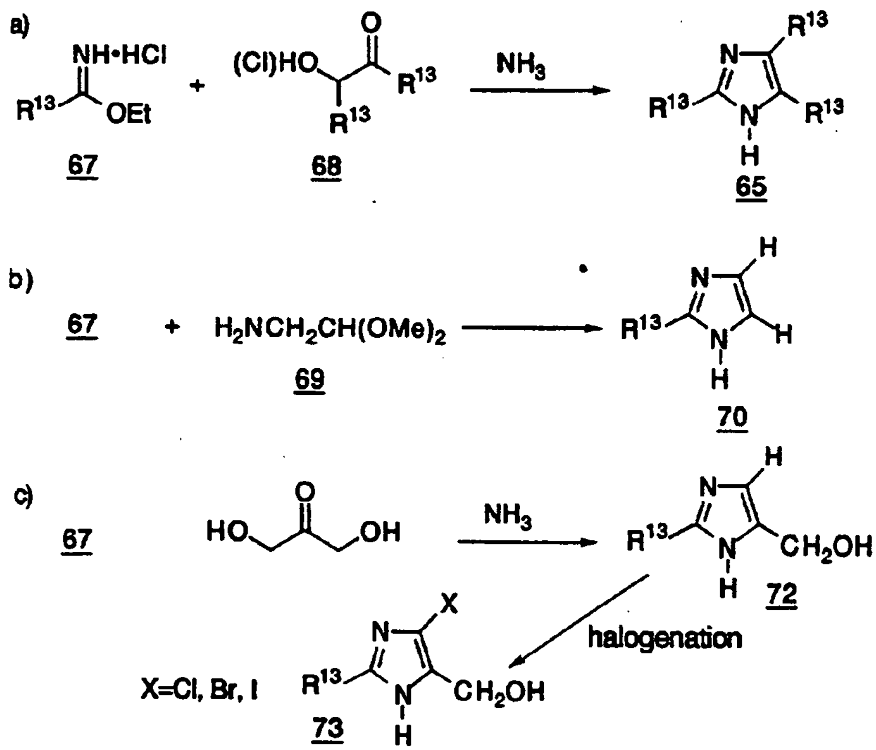
The rearrangement of α,ß-epoxy ketones 59 to ß-diketones 52 catalyzed by Pd° has been reported, R. Noyori, J. Amer. Chem. Soc. 102, 2095 (1980).

Mixed anhydrides such as 61, available from carboxylic acids 60 and trifluoroacetic anhydride, have been shown to acylate alkynes 62 to produce the enol trifluoroacetate of a ß-diketone 63. Transesterification by refluxing with methanol liberates the ß-diketone 52, A. L. Henne and J. M. Tedder, J. Chem. Soc. 3628 (1953).

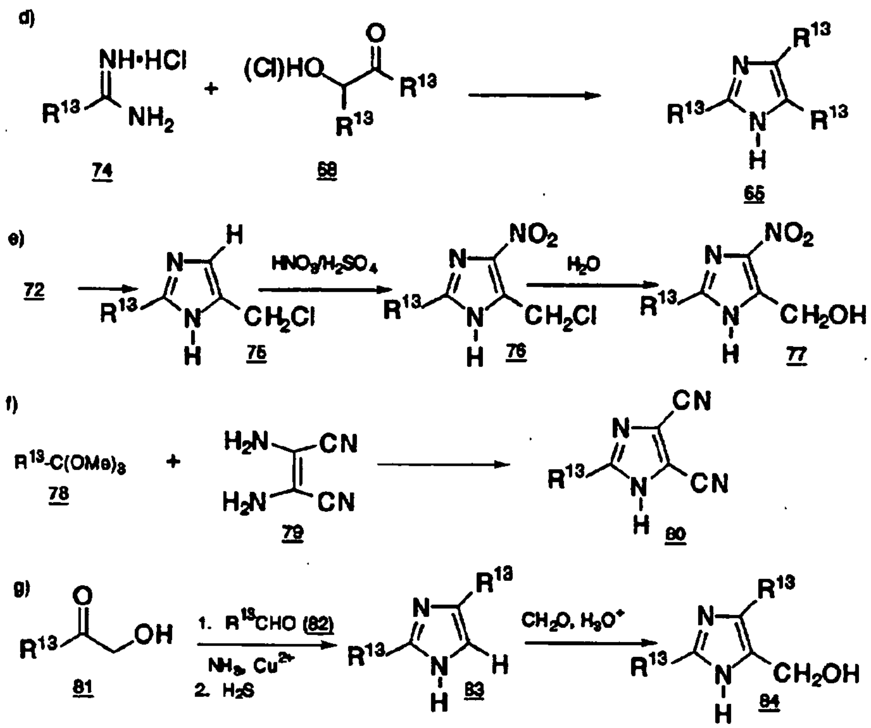
Scheme 13



Scheme 14



Scheme 14, cont'd.



Compounds where R^1=imidazole, such as 65, are readily available by any of a number of standard methods. For example, acylaminoketone 64 can be cyclized with ammonia or equivalents thereof, D. Davidson, et al., J. Org. Chem., 2, 319 (1937) to the corresponding imidazole as shown in Scheme 13. The corresponding oxazole 66 can also be converted to imidazole 65 by action of ammonia or amines in general, H. Bredereck, et. al., Ber., 88, 1351 (1955); J. W. Cornforth and R. H. Cornforth, J. Chem. Soc., 96, (1947).

Several alternative routes to imidazoles 65 are illustrated in Scheme 14. As shown in Scheme 14 equation a), reaction of the appropriate R^{13} substituted imidate esters 67 with an appropriately substituted

α-hydroxy- or α-haloketone or aldehyde 68 in ammonia leads to imidazoles of formula 65, P. Dziuron, and W. Schunack, Archive, Pharmaz., 307 and 470 (1974).

The starting imidazole compounds 65 wherein R^{13} is hydrogen can be prepared as shown in equation b) by reaction of the appropriate R^{13}-substituted imidate ester 67 with α-aminoacetaldehyde dimethyl acetal, M. R. Grimmett, Adv. Heterocyclic Chem., 12, 103 (1970).

As shown in equation c), imidazole 72 (wherein R^{13}=hydrogen and CH_2OH) can be prepared by treatment of the imidate ester 67 with 1,3-dihydroxyacetone 71 in ammonia by the procedure described in Archive der Pharmazie, 307, 470 (1974). Halogenation of imidazole 72 or any imidazole wherein R^{13} is hydrogen is preferably accomplished by reaction with one to two equivalents of N-halosuccinimide in a polar solvent such as dioxane or 2-methoxyethanol at a temperature of 40-100°C for 1-10 hours.

Compounds of formula 73 can also be prepared from 70 by reaction with formaldehyde as described in E. F. Godefroi, et al., Recueil, 91, 1383 (1972) followed by halogenation as was described above.

As shown in equation d) the imidazoles 65 can also be prepared by reaction of R^{13} substituted amidines 74 with an α-hydroxy- or α-haloketone or aldehyde 68 as described by F. Kunckel, Ber., 34, 637, (1901).

As shown in equation e), preparation of the nitroimidazoles (65, $R^{13} = NO_2$) is preferably accomplished by heating the appropriate starting imidazole in a 3:1 mixture of conc. sulfuric acid/conc. nitric acid at 60-100°C for 1-6 hours. Nitration of the imidazole can be achieved by first converting the hydroxmethylimidazole to the corresponding chloromethylimidazole 75 employing thionyl chloride or

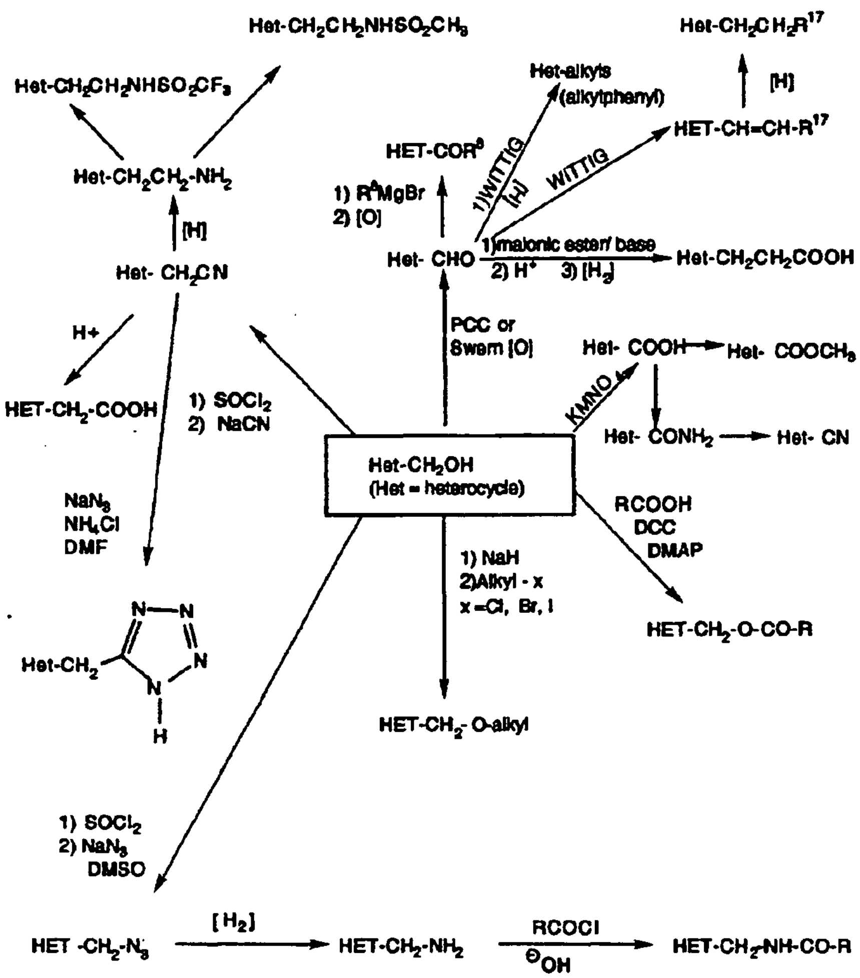
oxalyl chloride. Nitration, as described above, followed by hydrolysis provides the nitroimidazoles 77.

Imidazoles 80 where R^{13} = CN can be prepared as shown in equation f) by reaction of R^{13} substituted ortho esters, ortho acids or aldehydes (followed by oxidation of the aldehyde) with diaminomaleonitrile 79 by the procedure described by R. W. Begland et al., J. Org. Chem., 39, 2341 (1974). Likewise, R^{13} substituted imidate esters 67 also react with diaminomaleonitrile to give 4,5-dicyanoimidazoles 80. The nitrile groups can be further elaborated into other functional groups by methods familiar to one skilled in the art.

Compounds wherein R^{13} = alkyl of 1-6 (straight or branched), phenyl, phenalkyl where alkyl is 1-3 carbon atoms, etc. and another R^{13} = CH_2OH can be prepared as shown in equation g). The imidazoles 83 were prepared as described in L A. Reiter, J. Org. Chem., 52, 2714 (1987), Hydroxymethylation of 83 as described by U. Kempe, et al. in U.S. Patent 4,278,801 provides the hydroxymethylimidazoles 84.

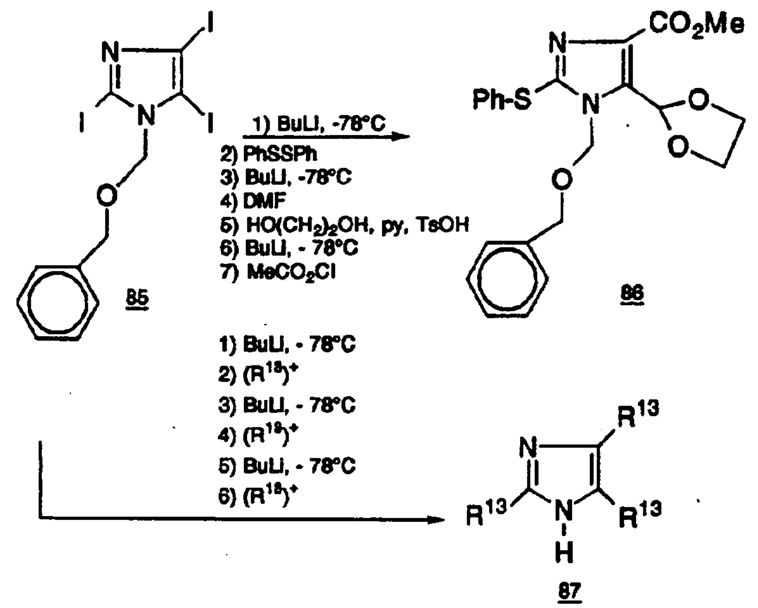
The CH_2OH group, as in imidazolemethanol 72, is a versatile synthon for other functional groups. Scheme 15 shows some of these transformations, all of which are familiar to one skilled in the art.

Scheme 15



A suitably protected imidazole 85 may undergo selective halogen-metal exchange followed by quenching with electrophiles to yield trisubstituted imidazoles (Scheme 16) (M. Groziak and L. Wei J. Org. Chem. (1992) 57, 3776). This strategy can be used to add several R^{13} groups onto the imidazole ring. By changing the order in which the electrophiles are added, one may change the position to which the electrophile gets attached onto the imidazole ring.

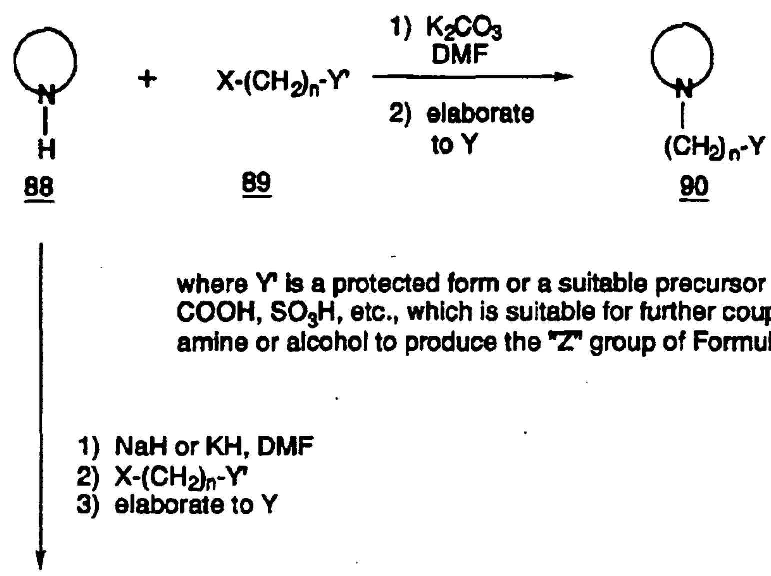
Scheme 16



where $(R^{13})^+$ is a suitable electrophilic precursors to R^{13}.

The pyrazoles and imidazoles disclosed previously and other heterocycles which will be mentioned later in this specification may undergo alkylation onto a nitrogen

Scheme 17



88 89 90

where Y' is a protected form or a suitable precursor to Y; Y is COOH, SO_3H, etc., which is suitable for further coupling to an amine or alcohol to produce the "Z" group of Formula (I).

90

atom just as the pyrrole in Scheme 4 by simply stirring a mixture of the heterocycle 88 and alkylbromide, iodide, mesylate or tosylate 89 in the presence of an acid scavanger such as potassium carbonate in an inert solvent such as THF or DMF for several hours to several days at room temperature or up to the reflux temperature of the solvent (Scheme 17).

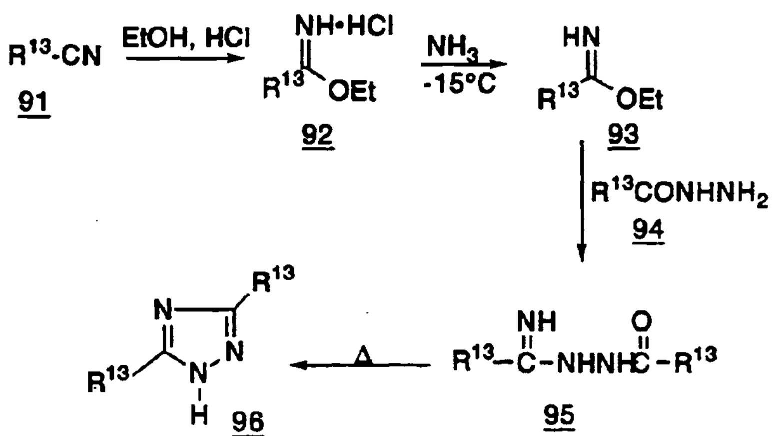
Another way to make 90 involves first deprotonation of the N-H of heterocycle 88 with a base such as NaH, KH, n-BuLi, t-BuLi, etc., followed by displacement of the X-leaving group of 89 to yield 90.

This sequence can be performed in inert solvents such as ether or THF. NaH and KH can also be employed in DMF and DMSO at room temperature or at a higher temperature. Alkylation sometimes yields regioisomers when more than one nitrogen atom is present in the heterocycle. These isomers can be separated by standard methods such as crystallization or chromatography. Once

alkylated, the Y group can be coupled to the boronic acid moiety and all protecting groups removed to yield compounds of Formula I by procedures described previously.

Compounds where R^1 = 1,2,4-triazole can be prepared by the route of H. Paul, G. Hilgetag and G. Jahnchen, Chem. Ber., 101, 2033 (1968) which is depicted in Scheme 18. Imidate ester 92 is formed from nitrile 91 by the method of P. Keynaud and R. D. Moreau Bull. Soc. Chim. France, 2997 (1964). Hydrazide 99 is easily

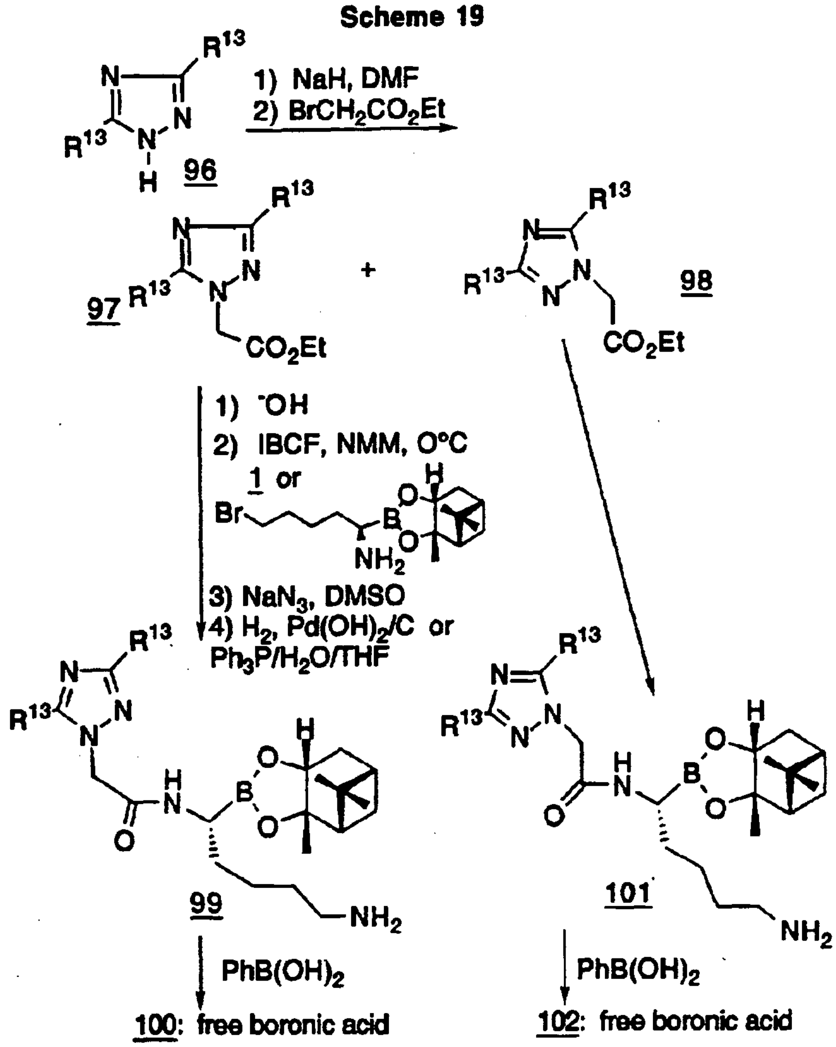
Scheme 18



prepared via the action of hydrazine on the corresponding methyl ester precursor. It is understood that R^{13} of 91 and 94 do not necessarily have to be in their final form, for example. In each case, they can exist as either a protected species or in the form of a precursor to R^{13}.

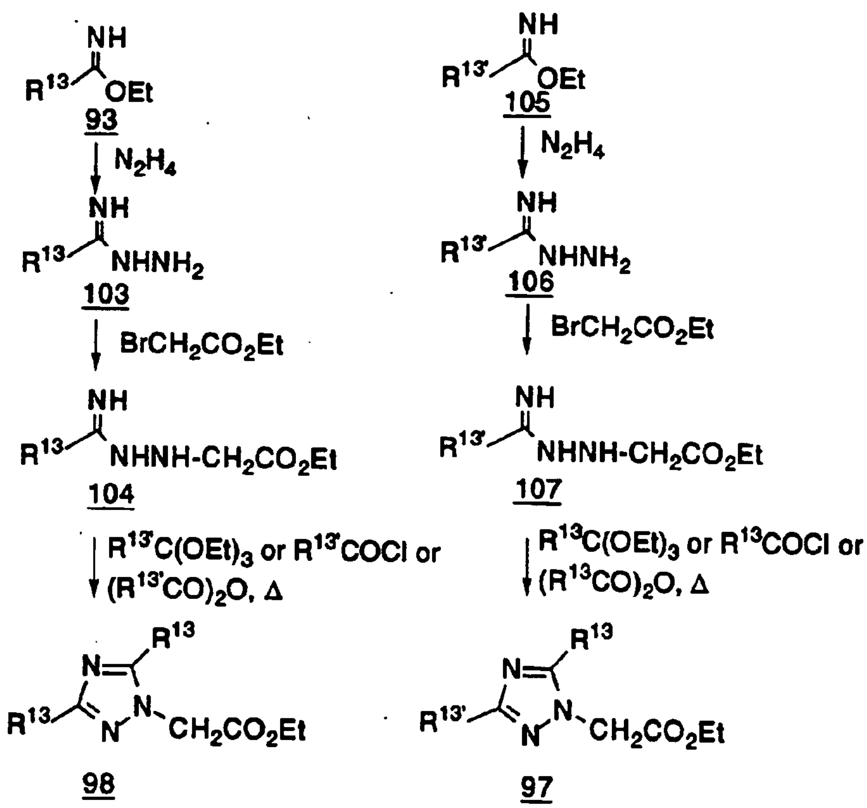
Alkylation of triazole 96 yields two isomeric products 97 and 98 when the R^{13} groups are not identical. These intermediates can be converted into final products in the usual fashion as shown in Scheme 19.

Scheme 19


1) NaH, DMF
2) $BrCH_2CO_2Et$
96
97
98
1) ^-OH
2) IBCF, NMM, 0°C
1 or
3) NaN_3, DMSO
4) H_2, $Pd(OH)_2/C$ or
$Ph_3P/H_2O/THF$
99
101
$PhB(OH)_2$
100: free boronic acid
102: free boronic acid

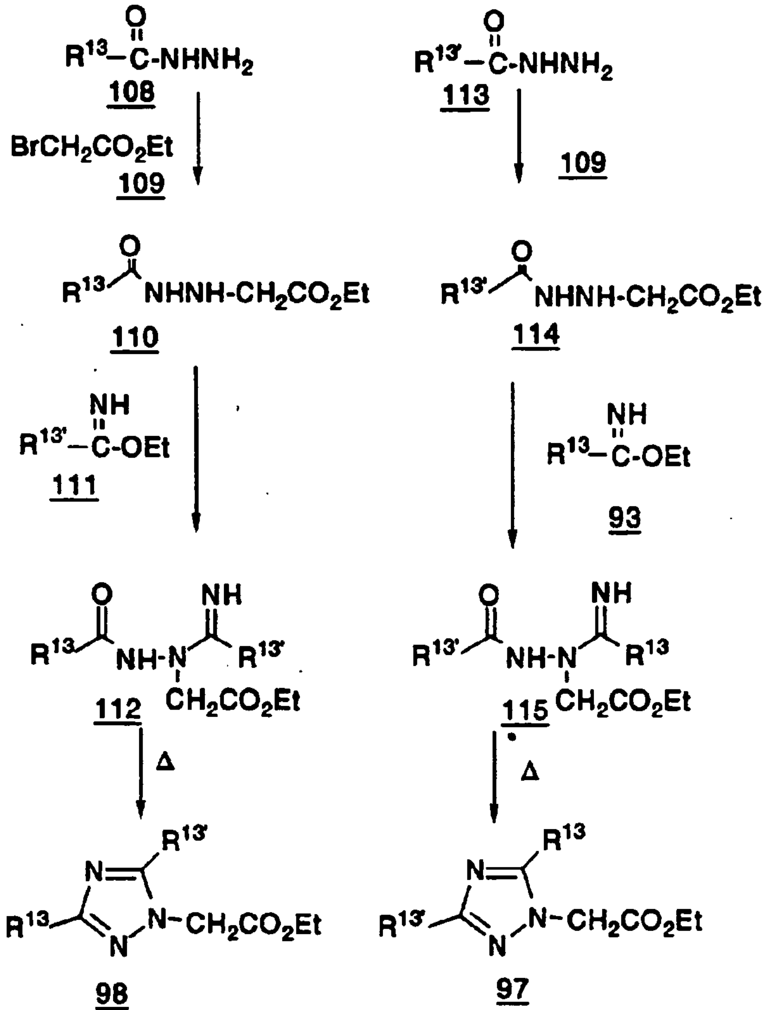
The regioselective syntheses of both 97 and 98 are shown in Scheme 20. Imidate ester 93 is reacted with hydrazine to form amidrazone 103. Alkylation with methyl µ-bromoacetate yields 104. Ring closure with either an ortho-ester, acid chloride or anhydride yields triazole 98. For a similar triazole synthesis, see David B. Reitz, European Patent Application 508, 445, published 14.10.92., G. D. Searle & Co. For schemes 20, 21 and 22, the different R^{13} groups are differentiated from one another by the placement of a prime symbol next to one of the R^{13} groups, i.e. $R^{13'}$.

Scheme 20



Yet another regioselective synthesis of <u>97</u> or <u>98</u> is depicted in Scheme 21 following a similar sequence as was shown in Scheme 20 (D. B. Reitz, ibid.).

Scheme 21

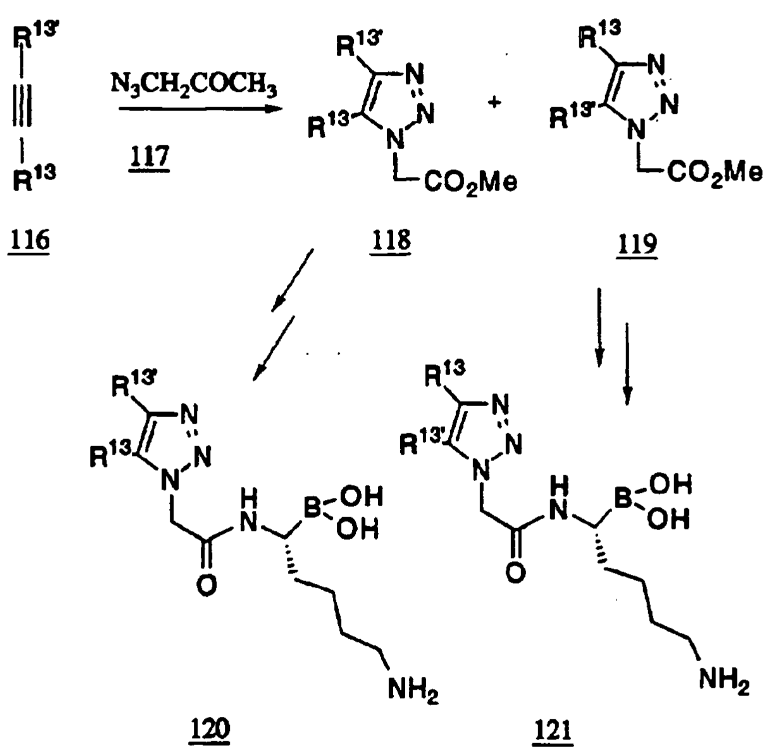


1,2,4-Triazoles also undergo selective metalation at the 5-position when the nitrogen at the 1-position is suitably protected. The metallated triazole can then be quenched through the addition of an electrophile to result in a newly functionalized triazole at the 5-

position. Suitable protecting groups are benzyl and trityl. (D. K. Anderson, et al., J. Heterocyclic Chem., 23, 1257 (1986) as well as diethoxymethyl (S. Ohta, et al., Chem. Pharm. Bull., 41, 1226 (1993). The 3-position can also be metallated if the 5-position is suitably protected (S. Ohta et al., ibid.). Thus here we have two other methods for introducing R^{13} substituents at the 5- or 3-positions of the 1,2,4-triazoles.

Compounds where R^1 = 1,2,3-triazole can be synthesized via the 1,3-dipolar cycloaddition of an azide to an alkyne as shown in Scheme 22 (for an example of this cycloaddition reaction, see W. Kirmse and L. Horner Justus Liebigs Ann. Chem. (1958) 614, 1).

Scheme 22

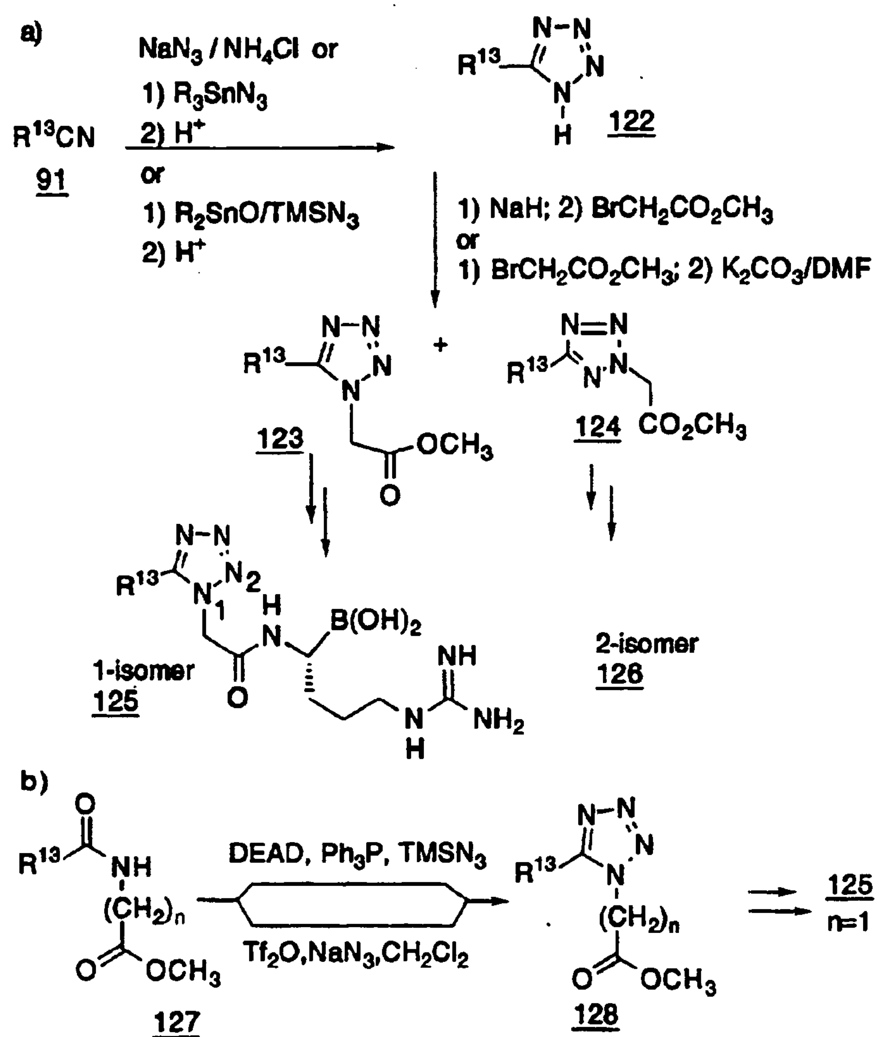


Compounds where R^1 = tetrazole can be synthesized by the methods outlined in Scheme 23. In line a, three methods are given for the conversion of a nitrile into a tetrazole (ammonium chloride/sodium azide: W. G. Finnegan et al., J. Am. Chem. Soc. 1958, 80, 3908; trialkyltin azides: J. G. Luitjen et al., Rec. Trav. Chim. Pays-Bas; dialkyltin oxide: S. Wittenberger and B. G. Donner, J. Org. Chem., 1993, 58, 4139).

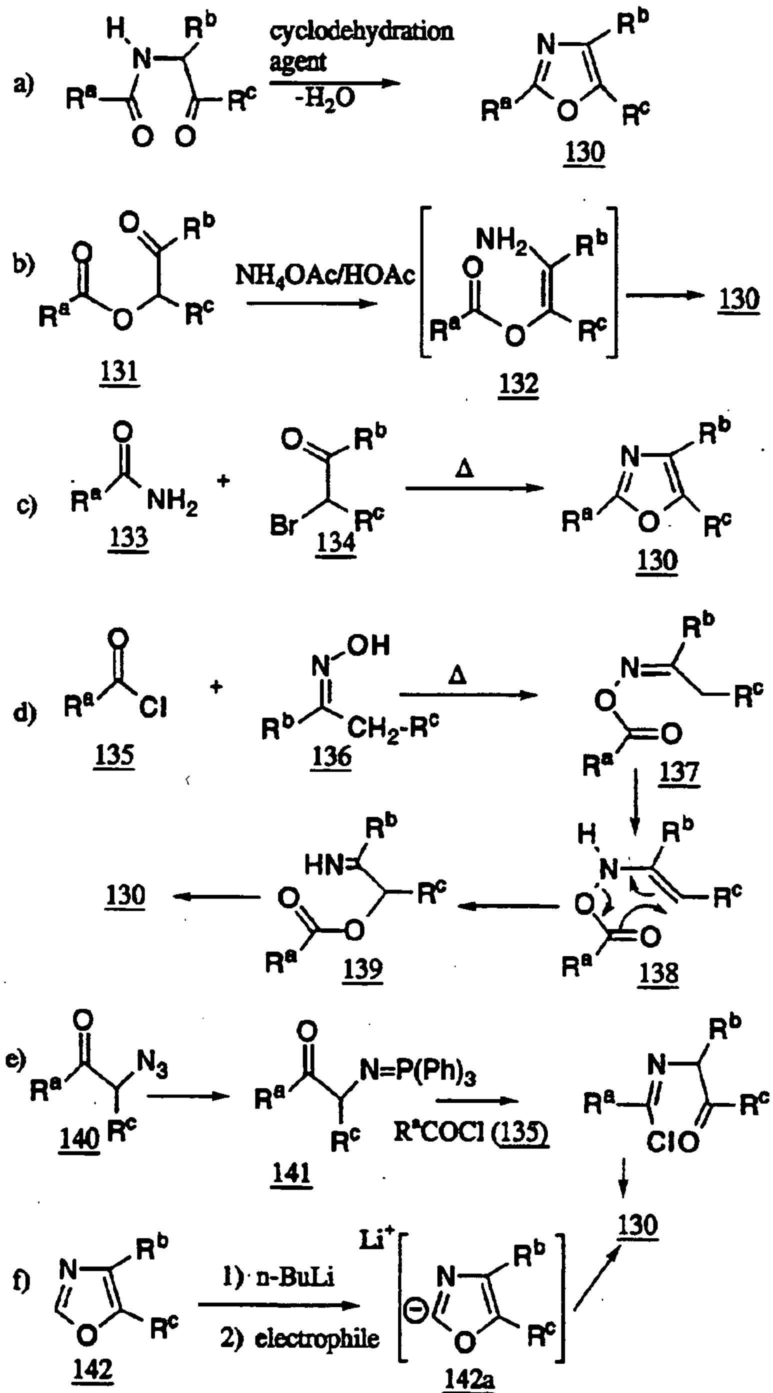
In Scheme 23, line b, two procedures are given for the regioselective synthesis of 1,5-disubstituted tetrazoles (DEAD, Ph_3P, $TMSN_3$: J. V. Duncia, M. E. Pierce, J. B. Santella III, J. Org. Chem. 1991, 56 2395; Tf_2O/NaN_3: E. W. Thomas Synthesis, 1993, 767) which can be more difficult to synthesize due to the steric crowding of the substituents.

Compounds where R^1 is an oxazole may be synthesized by a variety of methods including those outlined in Scheme 24. The oldest synthesis and one of the most versatile is shown on line a), namely the cyclodehydration of 2-acylaminoketones (The Robinson-Gabriel Synthesis) (see I. J. Turchi in Oxazoles, Turchi, I. J., ed. John Wiley and Sons, New York (1986) p. 1). The 2-acylaminoketone starting materials may be synthesized from the Dakin-West reaction and modifications thereof (G.H. Cleland and F.S. Bennett Synthesis (1985) 681 and references therein). Some cyclodehydration agents include PCl_5, H_2SO_4, P_2O_5, $SOCl_2$, etc).

Scheme 23


a)
NaN3 / NH4Cl or
1) R3SnN3
2) H+
or
1) R2SnO/TMSN3
2) H+
R13CN
91
122
1) NaH; 2) BrCH2CO2CH3
or
1) BrCH2CO2CH3; 2) K2CO3/DMF
123
124
1-isomer
125
2-isomer
126
b)
DEAD, Ph3P, TMSN3
Tf2O,NaN3,CH2Cl2
127
128
125
n=1

Scheme 24


a)
cyclodehydration agent
-H2O
130
b)
NH4OAc/HOAc
131
132
130
c)
Δ
133
134
130
d)
Δ
135
136
137
138
139
130
e)
N=P(Ph)3
RaCOCl (135)
140
141
130
f)
1) n-BuLi
2) electrophile
Li+
142
142a

R^a, R^b and R^c are equal to R^{13} which is described in the scope of this application. R^{13} in Scheme 24 does not have to be in finalized form as it appears in the scope, but can be in protected form or in the form of suitable precursors. It is understood that only when the entire molecule of formula I is synthesized do all of the substituents have to appear in their final forms as stated in the scope. Protected forms and suitable precursors to R^{13} are readily recognized by one skilled in the art of organic synthesis.

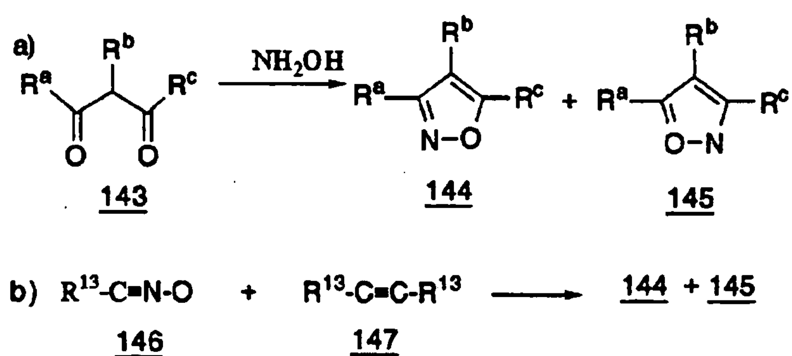
In line b, the reaction of α-acylketones 131 with ammonium acetate/acetic acid also yields oxazole 130 (D. Davidson, M. Weiss, M. Jelling J. Org. Chem. (1937), 2 328). In line c, we find the regioselective formation of oxazole 130 from the reaction of an α-haloketone 134 with amide 133 (R. Lakham, B. Ternai, Adv. Heterocycl. Chem. (1974) 17, 99; I. J. Turchi, M. J. S. Dewar, Chem. Rev. (1975), 75, 389). Acid chlorides 135 react with oximes 136 to yield after a [3,3] sigmatropic rearrangement (138) oxazole 130 as shown in line d (G. S. Reddy and M. V. Bhatt Ind. J. Chem. (1981) 208, 322; M. V. Bhatt, G. S. Reddy Tet. Lett. (1980) 21, 2359). In line e, µ-azidoketones (140), after reaction with triphenylphosphine to yield 141, react with acid chloride 135 to yield oxazole 130 (E. Zbiral, E. Bauer, J. Stroh Monatsh. Chem. (1971) 102, 168). Finally, oxazoles undergo deprotonation with strong bases such as n-BuLi at the 2-position when the 4 and 5 positions are blocked and after quenching with an electrophile can yield oxazole 130 (R. Schroder, V. Schollkopf, E. Blume, I. Hoppe Liebigs Ann. Chem., (1975) 533). As stated earlier, R^{13} can be either in final form as defined in the scope of this application or in the form of precursor functionality which later on can be elaborated into final form by methods familiar to one skilled in

the art. This holds true not only for the oxazoles discussed here, but for all of the other heterocyclic systems in this application where R^{13} appears as substituents.

Oxazoles are most readily brominated at the 5-position followed by the 4-position and finally the 2-position. A brominated oxazole (as well as other brominated heterocycles in this application) can undergo aryl cross-coupling reactions catalyzed by transition metals to yield aryl-or heteroaryl-substituted oxazoles (See for example E.-I. Negishi; A. O. King; N. Okukado J. Org. Chem. (1977) 42, 1821).

Compounds where R^1 is an isoxazole may be synthesized by the methods outlined in Scheme 25. In line a, reaction of 1,3-diketone 143 with hydroxylamine yields oxazoles 144 and 145. Nitrile oxide 146 can also add across the triple bond of alkyne 147 to yield isoxazoles 144 and 145. (See P. Grunanger and P. Vita-Finsi Isoxazoles, v. 49 pt. 1 of The Chemistry of Heterocyclic Compounds, E. C. Taylor and A. Weissberger, eds., John Wiley and Sons (New York: 1991) p. 126).

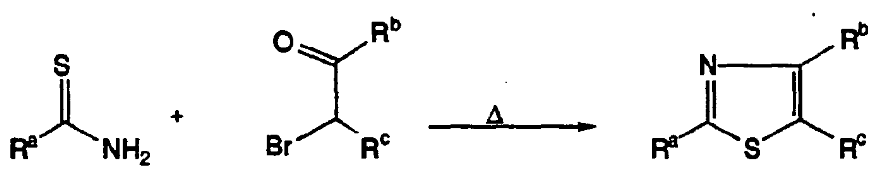
Scheme 25



As discussed previously R^a, R^b and R^c in Scheme 25 are again equal to R^{13} and are not necessarily in final form as they appear in the scope of this application.

Compounds wherein R^1 is a thiazole may be synthesized by the method depicted in Scheme 26, which mimics the route of Scheme 24c) describing a route for oxazoles. Thus thioamide 148 reacts with α-halocarbonyl compound 134 to yield thiazole 149. Again as for the oxazole, R^a, R^b, and R^c have the same definitions. For the synthesis of thiazoles, by the route depicted in Scheme 26, see G. Vernin "General Synthetic Methods for Thiazole and Thiazolium Salts" in Thiazole and Its Derivatives, J. V. Metzger, ed., volume 34. pt. 1 in The Chemistry of Heterocyclic Compounds, A. Weissberger and E. C. Taylor, eds. John Wiley and Sons (New York:1979) p. 180.

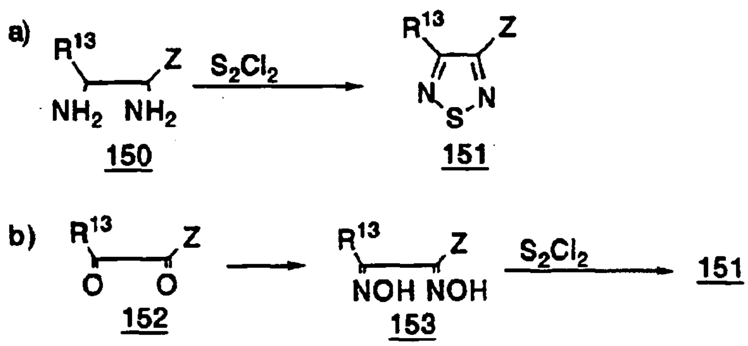
Scheme 26



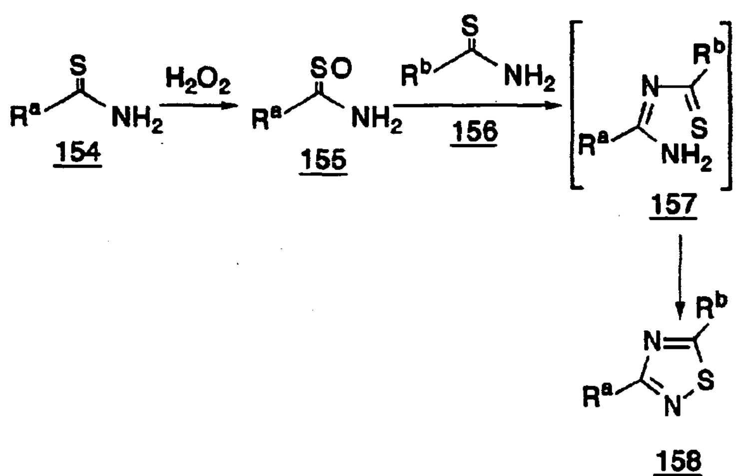
148 134 149

Compounds wherein R^1 is a 1,2,5-thiadiazole may be synthesized by the methods shown in Scheme 27. Diamine 150 may be reacted with sulfur monochloride to yield 1,2,5-thiadiazole 151. Likewise, α-diketone 152 may be converted into bisoxime 153 which also reacts with S_2Cl_2 to yield 151 (L. M. Weinstock, P. Davis, B. Handelsman, R. Tull J. Org. Chem. (1967) 32, 2823). Z is defined in Scheme 24.

Scheme 27



Scheme 28



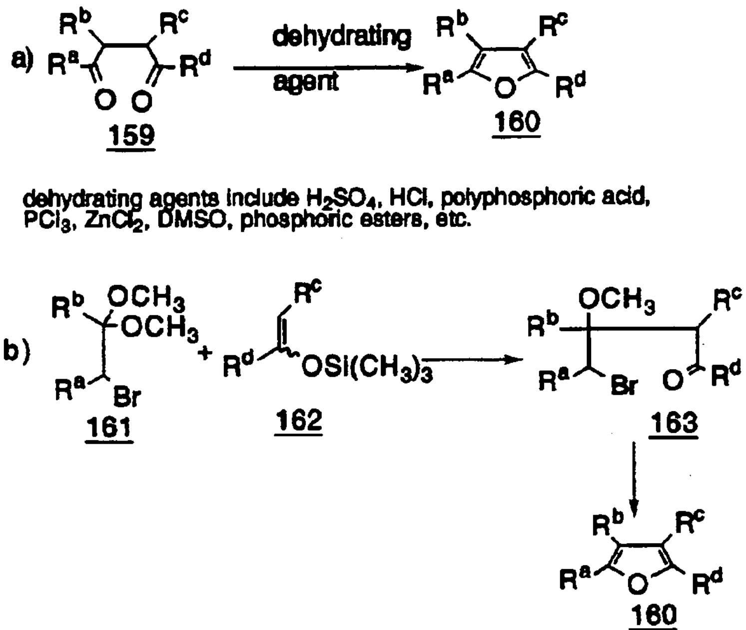
Compounds wherein R^1 is a 1,2,4-thiadiazole may be synthesized by the method depicted in Scheme 28. Oxidation of thioamide 154 with hydrogen peroxide yields S-oxide 155 which must be stored at 0°C. Further reaction of the S-oxide intermediate with thioamide 156 yields thioacylamidine 157 which cyclizes to product 158

(V. Goerdeler, H. Porrmann Chem. Ber. (1962) 95, 627). R^a and R^b are as defined previously in Scheme 24.

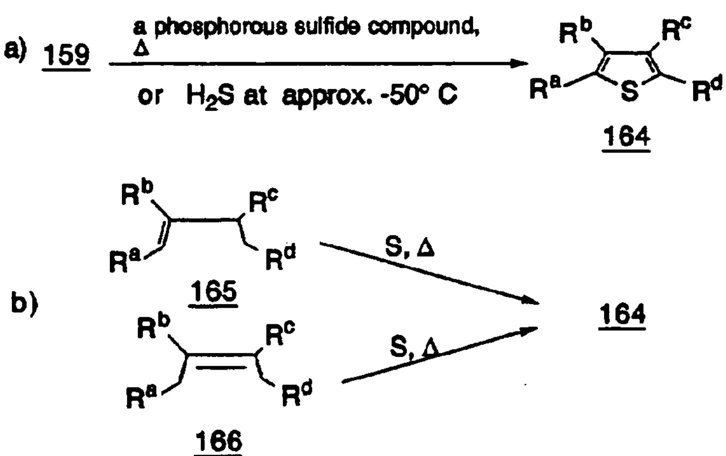
Compounds where R^1 is a furan may be synthesized by the methods shown in Scheme 29, but as understood by one skilled in the art, not limited thereto, as in the case as for all of the schemes in this patent application. In line a, cyclodehydration of 1,4- dicarbonyl compound 159 yields furan 160 (L. D. Krasnoslobodskaya, Ya. L Gol'dfarb Russ. Chem. Rev. (Engl. Trans.) 1969, 38, 389). In line b, α-bromoketone or aldehyde 161 protected as its dimethyl ketal or acetal reacts with trimethylsilylenol ether 162 to yield intermediate 163 which cyclizes to furan 160 (T. Mukaiyama, H. Ishihara, K. Inomata Chem. Lett., 1975, 527). R^a, R^b, R^c, and R^d are R^{13} which is described in the scope of this application and with similar limitations as were described under Scheme 24 for R^{13} with regards to being in final form or not.

Compounds where R^1 is a thiophene may be synthesized by the methods shown in Scheme 30. In line a, 1,4-dicarbonyl compound 159 is reacted with a phosphorous sulfide (phosphorous pentasullfide, phosphorous trisulfide, phosphorous heptasulfide, etc.) to yield thiophene 164 (H. D. Hartough, Chem. Heterocycl. Compd., 1952, 3, 1). The dicarbonyl compound 159 also reacts with H_2S to favor thiophenes at lower temperatures (-50°C) (F. Duus Tetrahedron, 1976, 32, 2817). Reaction of alkenes 165 or 166 (line b) with sulfur and heat also yield thiophene 164 (A. S. Broun, M. G. Voronkov J. Gen. Chem. USSR. (Engl. Trans.) (1947) 17, 1162; M. g. Voronkov, A. S. Broun, ibid, (1948) 18, 700; J. Schmitt,, M. Suquet, R. Fallard (C. R. Hebd. Seances Acad, Sci. (1956) 242, 1738. R^a, R^b, R^c and R^d are as defined in Scheme 29.

Scheme 29



Scheme 30



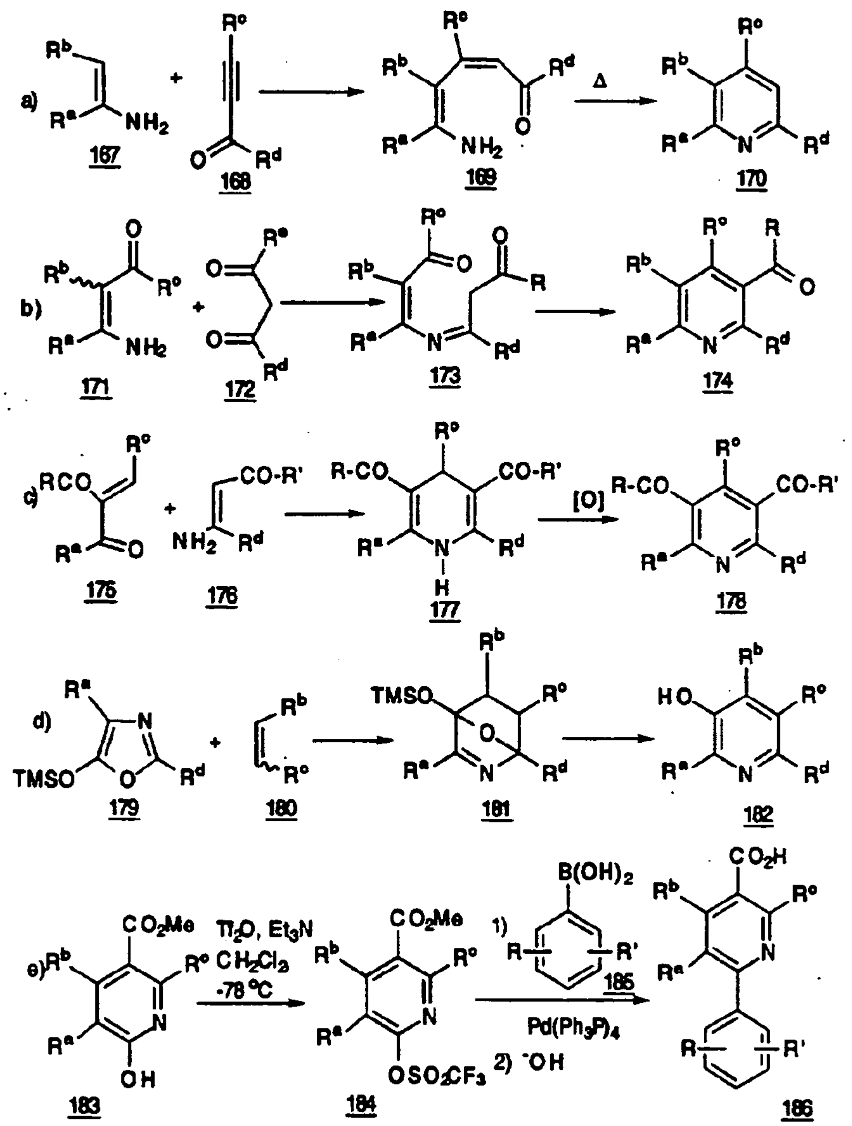
Compounds where R^1 is a pyridine may be synthesized by the methods shown in Scheme 31. It is to be understood that each scheme and each reaction has its own scope and limitations and that no one synthesis is

universally applicable. It is also to be understood that one skilled in the art will be able to determine which synthesis is best suited for his or her needs. In line a, reaction of enamine 167 with ethynyl ketone 168 will cyclize to pyridine 170 (F. Bohlmann, D. Rahtz Chem. Ber. (1957) 90,, 2265). Enamino ketones 171 (line b) condense with 1,3-diketones or beta-keto esters 172 to yield pyridine 174 where R is alkyl, aryl or alkoxy and aryloxy (N. K. Kachetkov, A. Gonsales, A. Nesmeyanov Dokl. Akad, Navk, SSSR (1951) 79, 609; S. Auricchio, R. Bernardi, A. Ricca Tet. Lett. (1976) 9831; H. Henecka Chem. Ber. (1949) 82, 41).

The Hantsch dihydropyridine synthesis can be used in the synthesis of pyridines as shown in line c. There are many modifications of this synthesis of which only one is shown. Reaction of 175 with beta-aminocrotonate 176 yields dihydropyridine 177 (F. Bassett, H. Meyer, E. Wehinger Angew. Chem. Int. Ed. Engl. (1981) 20, 762). Further oxidation with, for example, dilute nitric acid yields pyridine 178 where R and R^1 can be different alkoxy groups (E. Knoevenagel, W. Rushhaupt Ber. (1898) 31 1025). Cycloaddition of oxazole 179 with alkene 180 can also yield a pyridine (182) (M. Ya Karpeiskii, V. L. Florent'ev Russ. Chem. Rev. (Engl. Trans.) (1969) 38, 540; R. Lakhan, B. Ternai Adv. Heterocyl. Chem. (1974) 17, 99). In all of these pyridine synthesis, R^a, R^b, R^c, and R^d are as described for Scheme 29. All of the substituents around the pyridine ring can be in final form or in the form of a precursor to a given functional group as would be recognized by one skilled in the art. Finally, in line e, hydroxypyridines, such as 183, may be triflated and coupled with an aryl-or heteroarylboronic acid or aryl-or heteroaryltrialkylstannane using a transition metal catalyst such as Pd to yield aryl or

heteroarylpyridinecarboxylic acids, such as 186. This in turn may be coupled to aminoboronic acid esters as discussed previously to yield compounds of Formula I. Halogens, such as Br or I may be used instead of triflate in compound 184 to undergo what is known as the Suzuki coupling reaction. R and $R^{1'}$ in line e) are any of the allowed phenyl substituents in the scope of this application (Suzuki reactions: A. Suzuki Pure Appl. Chem. (1985) 57, 1749).

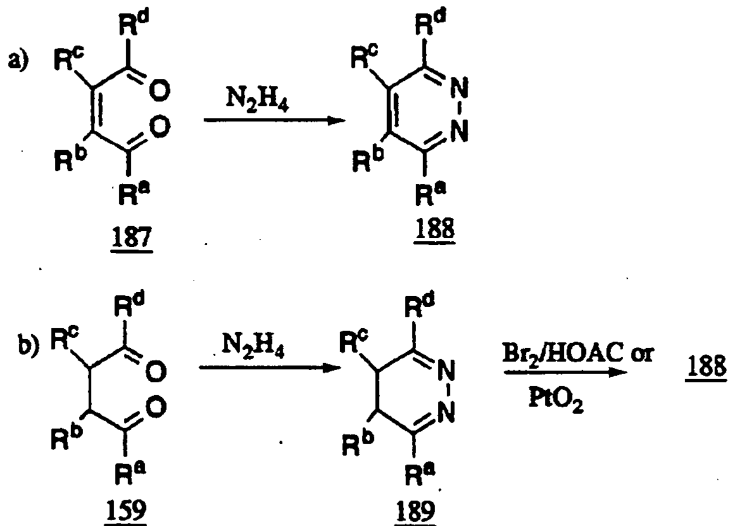
Scheme 31



Compounds where R^1 is a pyridazine may be synthesized by the routes shown in Scheme 32. Reaction of 1,4-carbonyl compound 187 with hydrazine yields pyridazine 188. If the 1,4-dicarbonyl compound is

saturated as in line b (compound 159), then the product from the reaction with hydrazine 189 must be oxidized to yield pyridazine 188 (K. C. Nicolaou, W. E. Barnette, R. L. Magolda J. Am. Chem. Soc. (1979) 101, 766;

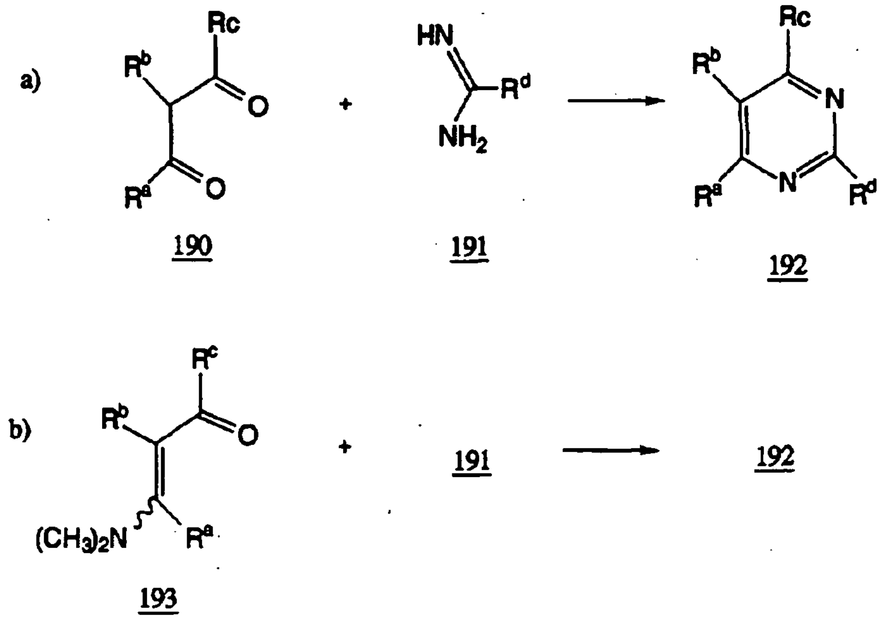
Scheme 32



M. Tisler, B. Stanovnik "Pyridazines and their Benzo Derivatives" in A. R. Katrizky, C W. Rees Comprehensive Heterocyclic Chemistry, v.3 (Pergamon Press: Oxford), 1984, p. 45). Halopyridazines or hydroxypyridazines may also undergo the same aromatic cross-coupling reactions as were described for pyridines. R^a, R^b, R^c and R^d, etc., are defined the same as in the pyridine case.

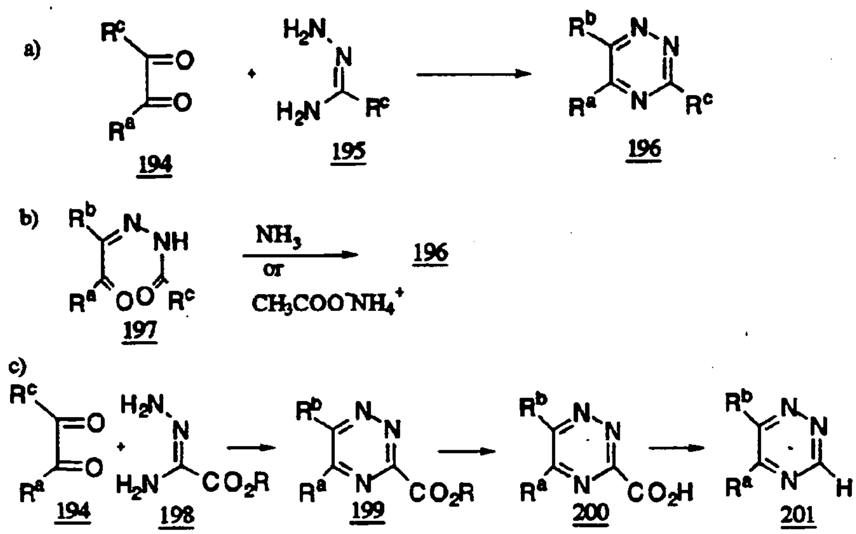
Compounds wherein R^1 is a pyrimidine may be synthesized by the methods shown in Scheme 33. Reaction of 1,3-dicarbonyl compound 190 with amidine 191 yields pyrimidine 192 (D. J. Brown, S. F. Mason The Pyrimidines in A. Weissberger ed. The Chemistry of Heterocyclic Compounds, (John Wiley: New York) 1962, p. 31).

Scheme 33



Reaction of amidine 191 with 193 also yields pyrimidines (P. Schenone, L. Sansebastiano, L. Mosti J. Heterocyclic Chem. (1990) 27, 295). R^a, R^b, R^c, and R^d are as defined previously in Scheme 32. Halopyrimidines or hydroxypyrimidines may also undergo the same aromatic cross-coupling reactions as were described for pyridines.

Scheme 34

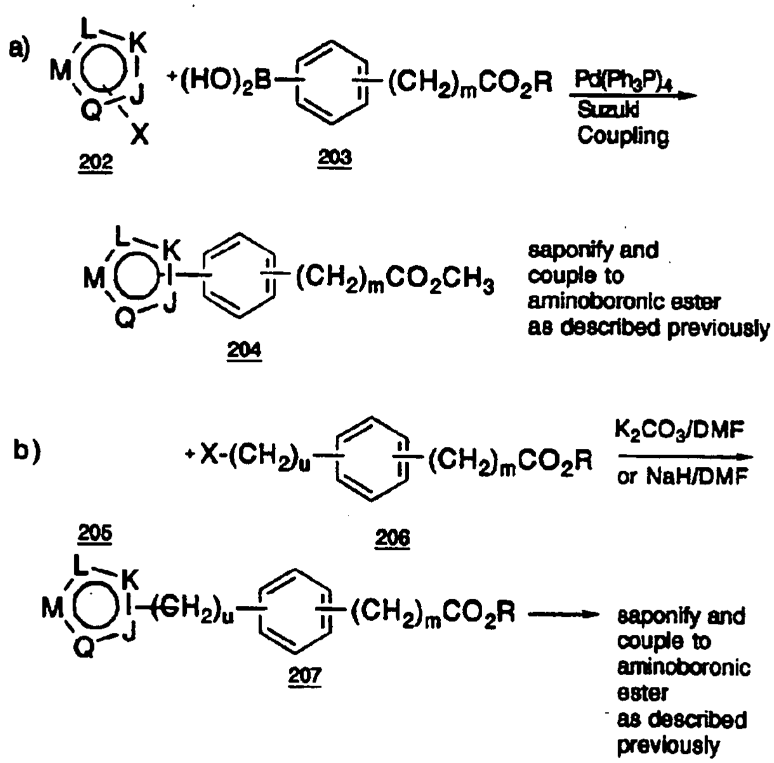


Compounds in which R^1 is a 1,2,4-triazine may be synthesized by the procedures outlined in Scheme 34. In line a, 1,3-dicarbonyl compound 194 is condensed with amidrazone 195 to yield triazine 196 (H. Neunhoeffer and P. F. Wiley Chemistry of 1,2,3-Triazines and 1,2,4-Triazines and Pentazines, v. 33 in A. Weissberger, E. C. Taylor, eds., The Chemistry of Heterocyclic Compounds John Wiley and Sons (New York: 1978) pp 194-200 and p. 524). In line b, cyclization of acylhydrazone 197 with ammonia or ammonium acetate leads to triazine 196 (H. Neunhoeffer, P. F. Wiley, ibid., p. 196, 197). In line c, reaction 1,2-dicarbonyl compound 194 with oxalamidrazonates 198 yields 1,2,4-triazine ester 199. Saponification of 199 yields 200 which can be decarboxylated to yield 1,2,4-triazine 201 (H. Neunhoeffer, P. F. Wiley, ibid., p. 526). R^a, R^b, and R^c are as defined in the pyridine case. Halotriazines or hydroxytriazines may undergo the same aromatic cross-

coupling reactions as were described earlier for pyridines.

Compounds in which R^1 is as described in lines k and l in the scope of this application may be synthesized by the methods described in Scheme 35. If heterocycle -J-K-L-M-Q- 202 contains a bromine, iodine or a hydroxyl group (which can be triflated) designated by X, then it can undergo a Suzuki coupling to yield 204 where u is 0 (A. Suzuki, ibid) (Scheme 35, line a). If instead of $B(OH)_2$ a trialkyltin group is present, then a Stille coupling can be performed when X = triflate (J. K. Stille Angew. Chem. Int. Ed. Engl. (1986) 25 508; J. K. Stille Pure Appl. Chem. (1985) 57, 1771).

Scheme 35



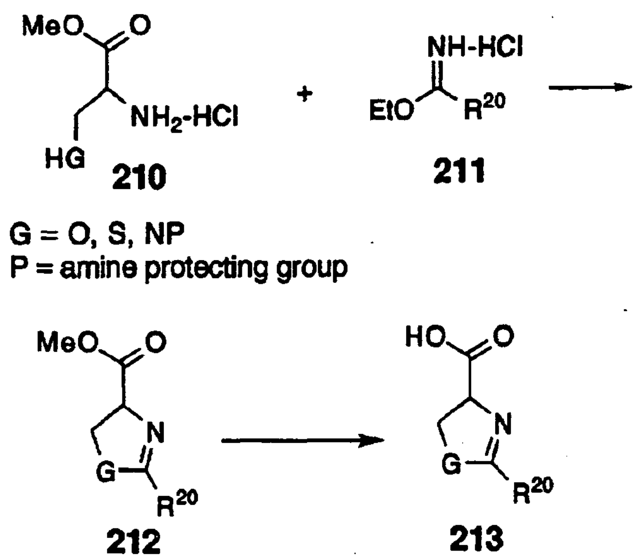
The X and $B(OH)_2$ (or trialkyltin) moieties may be reversed so that now X = $B(OH)_2$ (or R_3Sn) and the phenyl of 203 contains halogen or triflate group. The same coupling procedures may be used in synthesizing compounds where R^1 is described by line l and u is 0 as were used in synthesizing compounds where R^1 is described by line k and u is 0.

When u is not 0, heterocycle 205 and its six-membered ring counterpart -C-W-R-T-U-V- (described in line l) must be synthesized from scratch by the methods described heretofore, with the $-(CH_2)_u$-Phenyl-$(CH_2)_mCO_2R$ group being one of the substituents in final or precursor form. If heterocycle 205 contains an N-H which is alkylatable, then alkylation with 206 where X is Cl, Br, I, mesylate tosylate or triflate yields 207 (Scheme 35, line b). The esters 204 and 207 can then be hydrolyzed to the free acid and coupled with aminoboronic acid ester derivative as described in Scheme 4, for example, to yield boronic acid esters which can also be hydrolyzed to the corresponding free boronic acid products.

A general method (Scheme 36) for the synthesis of 4-carboxydihydroheterocycles (oxazolines, thiazolines, imidazolines) utilizes the condensation of an α-amino acid ester (**210**) with an imidate (**211**) to provide **212**, see: Meyers, A. I.; Hanagan, M. A.; Mazzu, A. L. *Heterocycles* **1981**, *15*, 361; Meyers, A. I.; Whitten, C. E. *Heterocycles* **1976**, *1*, 1687; North, M.; Pattenden, G. *Tetrahedron* **1990**, *46*, 8267; Jones, R. C. F.; Ward, G. J. *Tetrahedron Lett.* **1988**, *29*, 3853. In the case where R^{20} = H, the cyclization might be conducted with trimethyl orthoformate instead of **211**, see: Martin, P. K. et al. *J. Org. Chem.* **1968**, *33*, 3758. For compounds that are substituted only at the 2-position of the heterocycle, serine or cysteine might be used as the amino acid ester partner. The dihydroimidazole-based materials would be

prepared from an N^{α}-monoprotected diaminopropionic acid to prevent tautomerization of the double bond once the cyclic system of **212** has been formed, see: Martin, P. K. et al. *J. Org. Chem.* **1968**, *33*, 3758. Hydrolysis of the ester then affords carboxylic acid **213**.

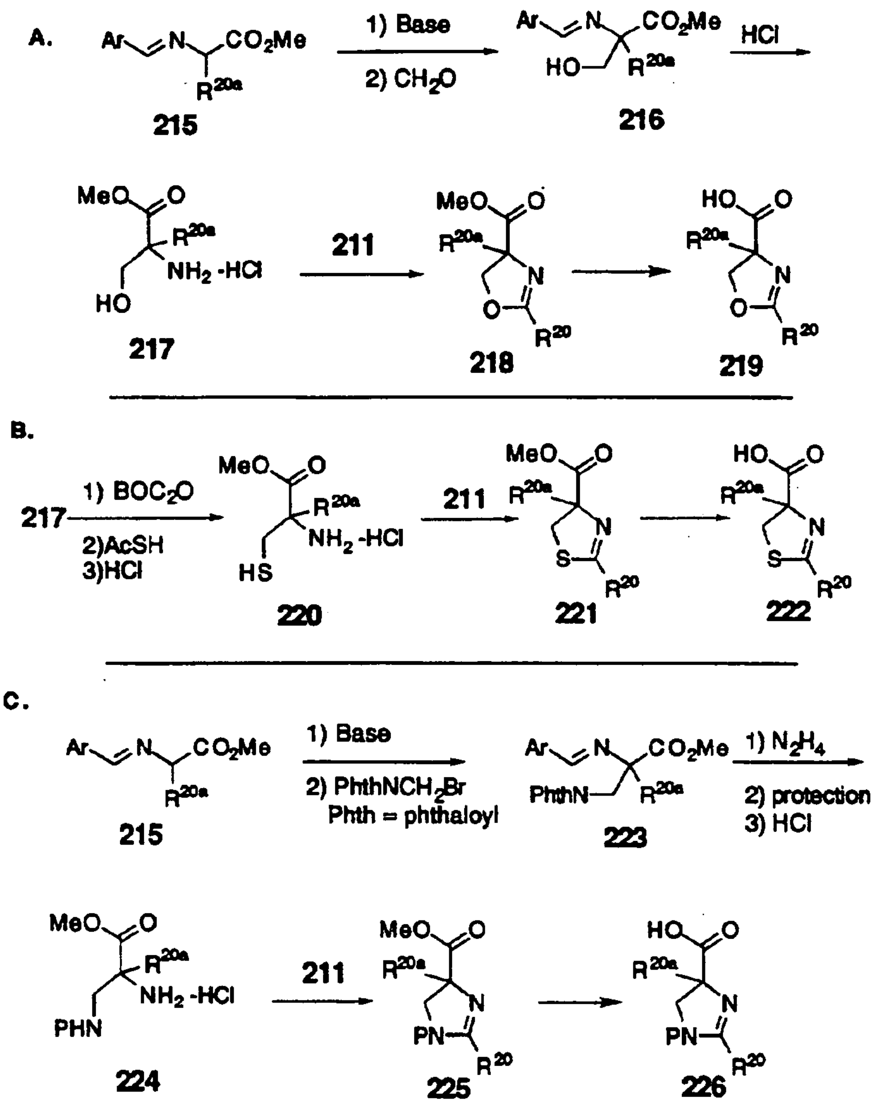
Scheme 36: Synthesis of 4-Carboxyheterocycles.



It may be desirable to prepare more highly substituted heterocycles as well (Scheme 37). An approach to the oxazoline class could utilize reaction between the anion of **215** and formaldehyde to provide adducts **216** as recorded by Kanemasa, S. et al. *Tetrahedron Lett.* **1993**, *34*, 677 and Ito, Y. et al. *Tetrahedron* **1988**, *44*, 5253. Hydrolysis of the imine should deliver **217**, an example of an α-substituted α-amino acids, as a mixture of isomers. Condensation as before with imidate (**211**) should generate cyclic moieties of general structure **218** which are hydrolyzed to **219**.

The corresponding thiazolines should be available by installing a sulfhydryl group prior to cyclocondensation. To that end, *N* - protection of **217**, followed by reaction with a sulfur nucleophile, a thiol ester or an inorganic salt thereof, based on the work reported by Mitsunobu, O. *Synthesis* **1981**, 1, and Yuan, W. et al. *J. Med. Chem.* **1993**, *36*, 211, should provide the substituted cysteine (**220**) upon premoval of the *N*-protecting group. Subsequent reaction with the imidate should deliver **221** and ultimately **222**, after hydrolysis of the ester.

Scheme 37: Synthesis of Substituted Heterocycles.



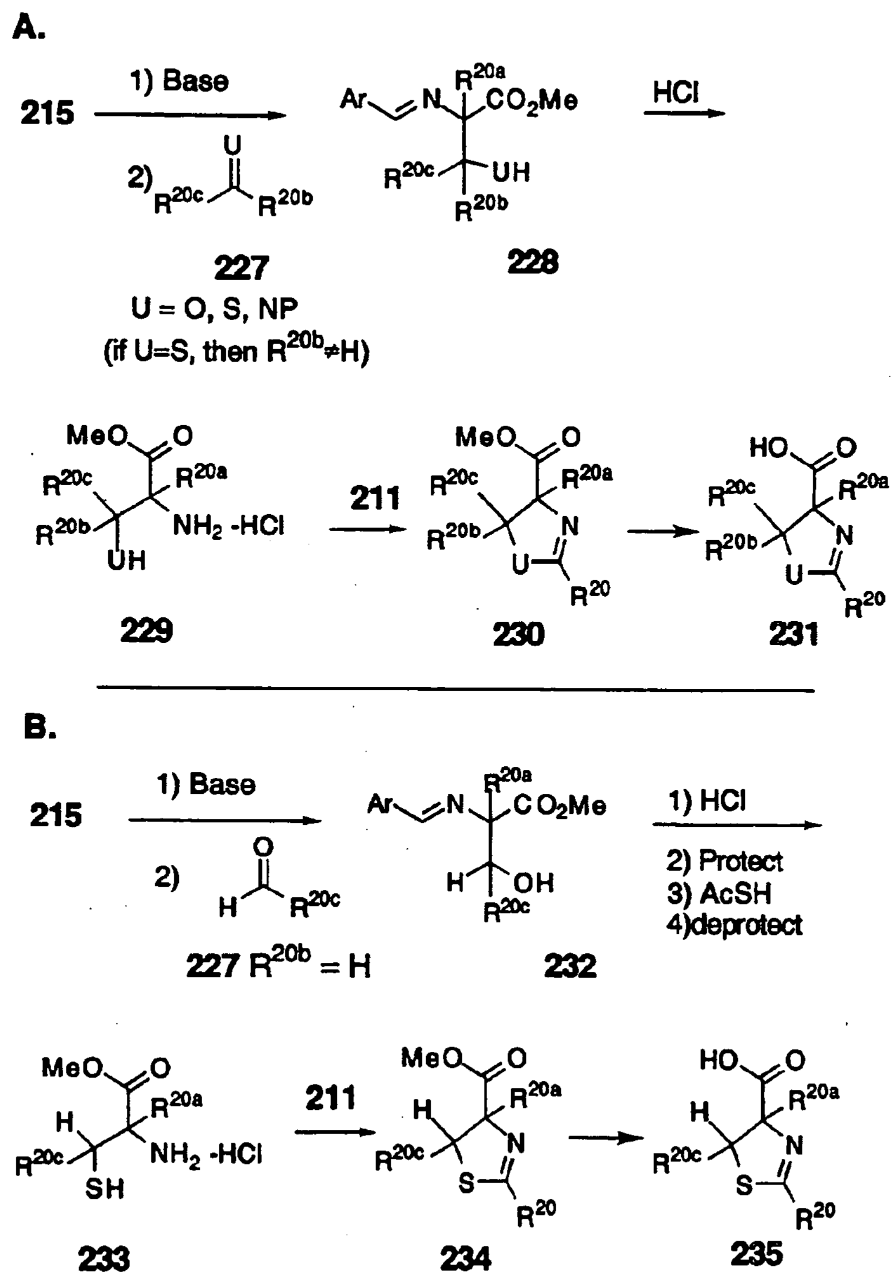
The imidazolines should be obtained via the condensation described by Jones, R. C. F.; Ward, G. J. *Tetrahedron Lett.* **1988**, *29*, 3853, of a suitable diamino acid with imidate **211**. The preparation parallels the sequences discussed above where the anion of **215** would be expected to generate adduct **223** as described by

Gilbert, I. et al. *Tetrahedron Lett.* **1991**, *32*, 2277. Manipulation of the protecting groups and implementation of the aforementioned cyclization should give imidazoline **225** which may be converted to the corresponding carboxylic acid **226**.

Using an analogous synthetic sequence (Scheme 38), the polysubstituted versions of these heterocycles should also be accessible. For the oxazo - or imidazo - type compounds, reaction of the anion of **215** with an electrophile **227** should deliver **228**, as reported by Kanemasa, S. et al. *Tetrahedron Lett.* **1993**, *34*, 677 [*cf.* Meyer, R. et al. *Liebigs Ann. Chem.* **1977**, 1183], and liberation of the a -amino group should then provide **229**, as a mixture of isomers. Application of the now standard cyclocondensation should complete the synthesis of **231** upon hydrolysis of **230**.

A similar sequence should provide an entry into the thiazolines series (**235**). However, in the case where R^{3b} = H, this material would be prepared by converting **232** to the corresponding mercaptan **233** using the conditions described earlier; the ester in **234** could then be hydrolyzed to afford **235**. This reaction sequence would be preferred to avoid use of a presumably unstable thioaldehyde (**227** where U = S and R^{3b} = H), see: Takahashi, T. et al. *Heterocycles* **1993**, *36*, 1601 and references therein.

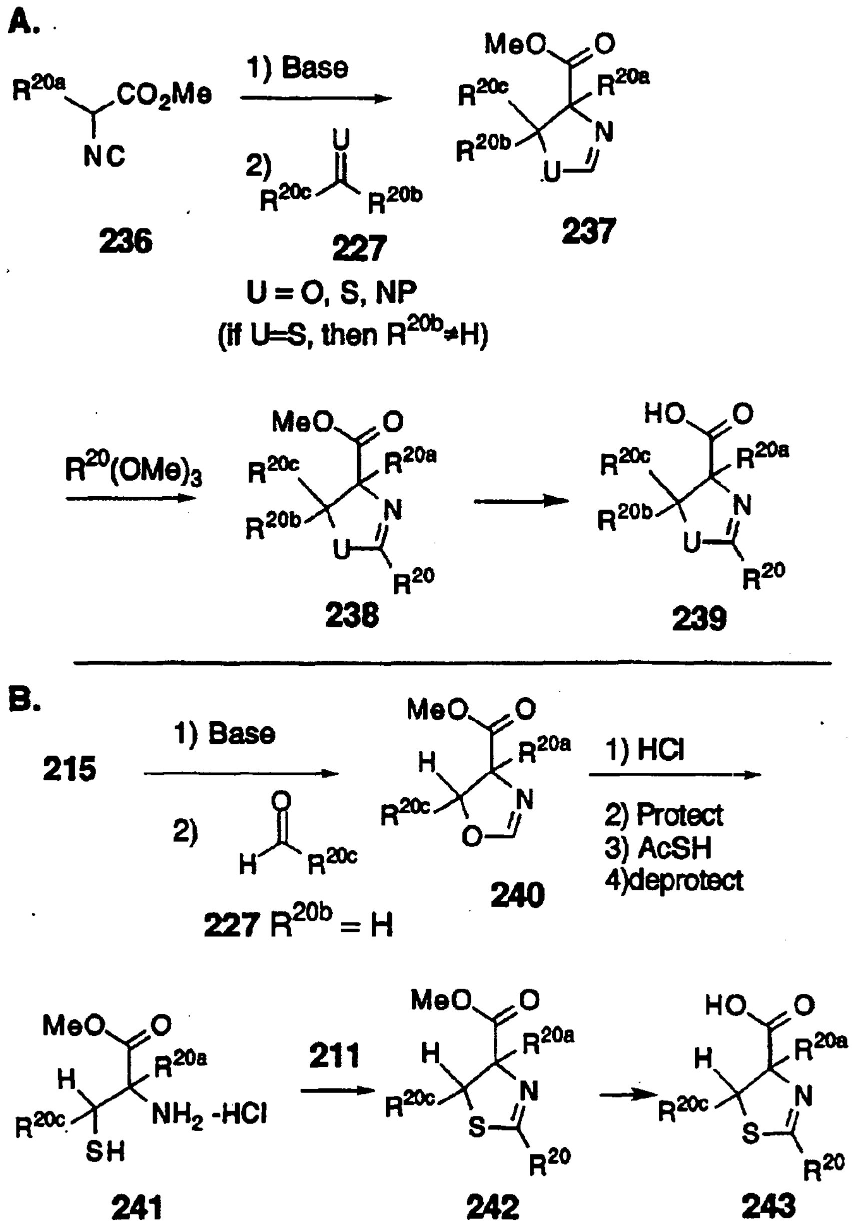
SCHEME 38: Polysubstituted Heterocycles, Synthesis I.



Alternative methods for the preparation of these polysubstitutued heterocycles employ (Scheme 39) the

addition of the anion of isocyanide **236** to an electrophile **227** to provide the heterocycle **237**, see: Ito, Y. et al. *Tetrahedron Lett.* **1989**, *30*, 4681; Ito, Y. et al. *Tetrahedron Lett.* **1988**, *29*, 6321, 235; Ito, Y. et al. *Tetrahedron Lett.* **1987**, *28*, 6215; Ito, Y. et al. *Tetrahedron* **1988**, *44*, 5253; Meyer, R. et al. *Liebigs Ann. Chem.* **1977**, 1183. The carboxylic ester may be manipulated at this time, however the preferred sequence would implement either an exchange reaction mediated by a transition metal catalyst as reported by Ito, Y. et al. *Tetrahedron* **1988**, *44*, 5253 to provide derivatives **238**; standard hydrolysis followed by reaction with imidate **211** would also yield **238**. Subsequent conversion to the carboxylic acid **239** should proceed smoothly. For cyclic compounds (**243**) where R^{20} = H, the preferred sequence would involve the sequential hydrolysis of adduct **240**, transformation of the hydroxyl group into a sulfhydryl function, cyclocondensation to thiazoline **242** and finally hydrolysis to afford the desired carboxylic acid **243**.

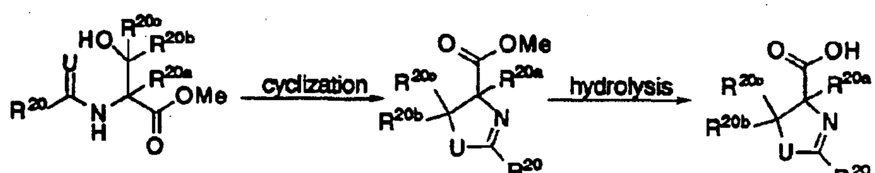
SCHEME 39: Polysubstituted Heterocycles, Synthesis II.



Another noteworthy method (Scheme 40) for the assembly of oxazolines and thiazolines utilizes an appropriate *N*-acyl-β-hydroxy-α-amino acid (**244**) which

reacts intramolecularly by cyclization of the amide carbonyl onto the hydroxyl group of the amino acid. This transformation may occur upon treatment with triphenylphosphine and an azodicarboxylate, as reported by Wipf, P.; Miller, C. P. *Tetrahedron Lett.* **1992**, *33*, 6267, 907 and Galéotti, N. et al. *Ibid.*, 2807, or through the use of diphenyl sulfoxide and triflic anhydride, as demonstrated by Yokokawa, F. et al. *Synlett* **1992**, 153, to generate the requisite ring system; in **245**. Hydrolysis of the ester then provides **246**. Alternatively, this cyclization may be effected by intramolecular displacement of the corresponding halo derivative (-OH --> halogen in **244**), which is generated *in situ*, to provide the oxazoline (**245**), see: Evans, D. A. et al. *J. Org. Chem.* **1992**, *57*, 1961.

SCHEME 40: Alternative Syntheses of Oxazolines and Thiazolines.



244 **245** **246**

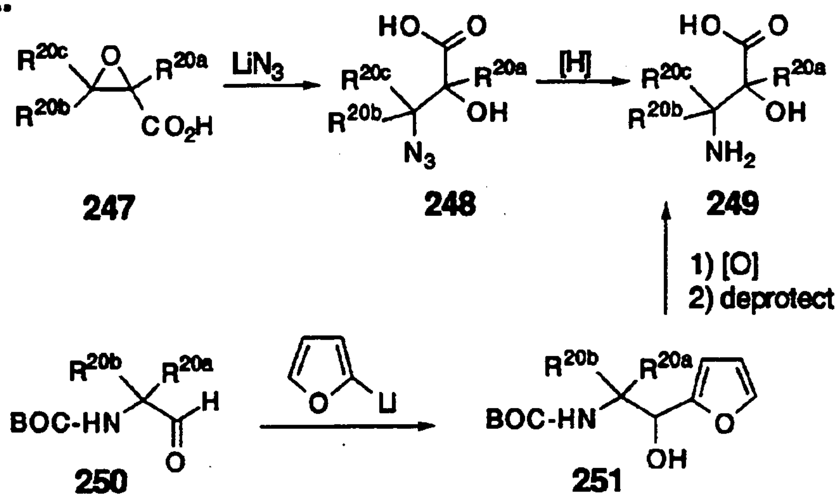
U=O, S

The regioisomeric 5-carboxyheterocycles may be synthesized (Scheme 41) by condensation of an appropriate α-functionalized β-amino acid with imidate **211**; for an example of this type of cyclization, see: Wolfe, S. et al. *Tetrahedron Lett.* **1979**, 3913. In the event, nucleophilic opening of an a, b - epoxy acid (**247**) with an inorganic azide such as lithium azide according to Chong, J. M.; Sharpless, K. B. *J. Org.Chem.* **1985**, *50*, 1563 should provide **248**; the corresponding esters also participate in this reaction, see:

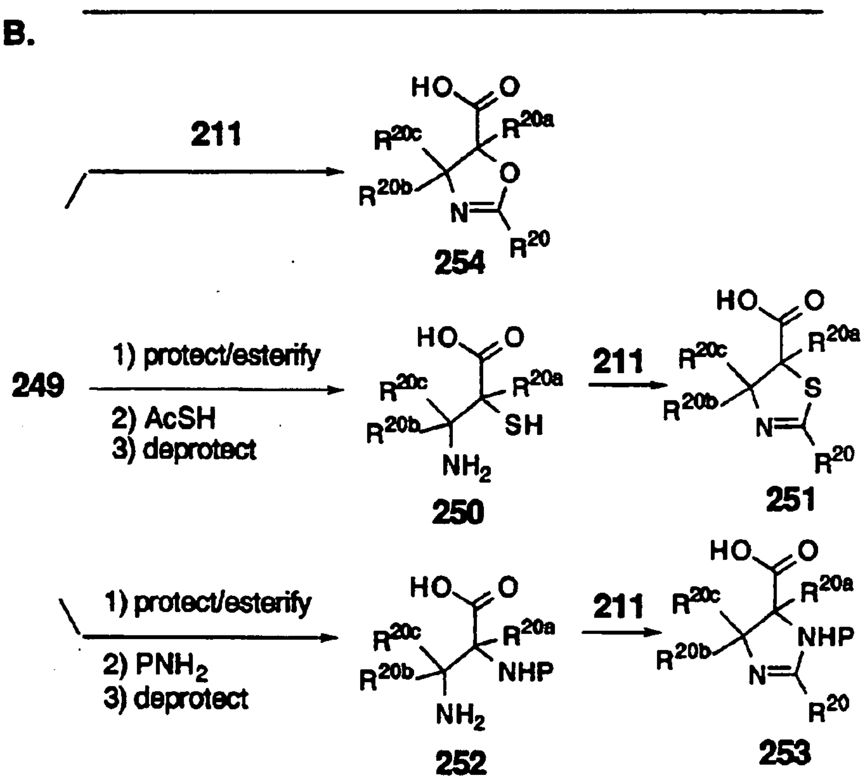
Commerçon, A. et al. *Tetrahedron Lett.* **1992**, 33, 5185. Reduction should give the requisite α-hydroxy-β-amino acid **249**. Alternatively, it may be desirable to prepare **249** from an a - amino acid directly as described by Poss, M. A.; Reid J. A. *Tetrahedron Lett.* **1992**, *33*, 1411, by reaction of the appropriate *N*-BOC compound (**250**) with 2-furyllithium to provide vicinal amino alcohol (**251**); manipulation of the furan moiety and deprotection then generates **249**. A similar approach using 2-lithiothiazoles may also be useful, see: Dondoni, A.; Perrone, D. *Tetrahedron Lett.* **1992**, *33*, 7259.

SCHEME 41: Regioisomeric Heterocycles, Synthesis I.

A.



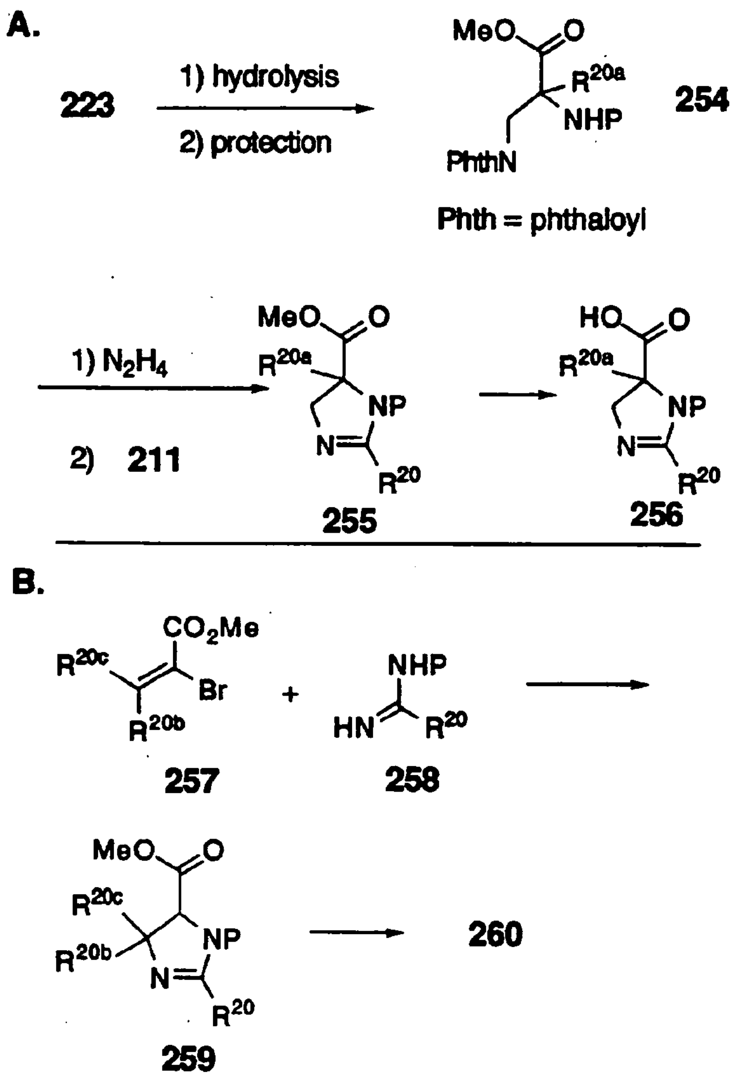
B.



Completion of the syntheses of the heterocycles should follow precedent. Reaction with of **249** with **211** should provide oxazoline **254** directly. This alcohol may also be used in a sequence described previously to allow for incorporartion of sulfur and ultimately provide **250**; this mercaptan should lead to thiazoline **251**. Additionally, **249** could be employed as a substrate for reaction with a nitrogen based nucleophile, see: Mitsunobu, O. *Synthesis* **1981**, 1 [*cf.* Cardani, S. et al. *Tetrahedron* **1988**, *44*, 5563], to deliver **252** as a precursor for imidazoline **253**.

The regioisomeric imiodazolines should be available from other routes as well (Scheme 42). One method would call for hydrolysis of imine **223**, discussed earlier in Scheme 37, followed by protection of the newly liberated α-amino group to give **254**. Cleavage of the phthaloyl residue and reaction with imidate **211** should provide **255** which is hydrolyzed to **256**. An alternative approach calls for reaction of an α-bromo-α,β-unsaturated ester (**257**) with an amidine (**258**) [sterically hindered (P is large) materials do not react] to generate **259** in a single step as reported by Marsura, A. et al. *Synthesis* **1985**, 537; hydrolysis of the ester should yield the acid **260**.

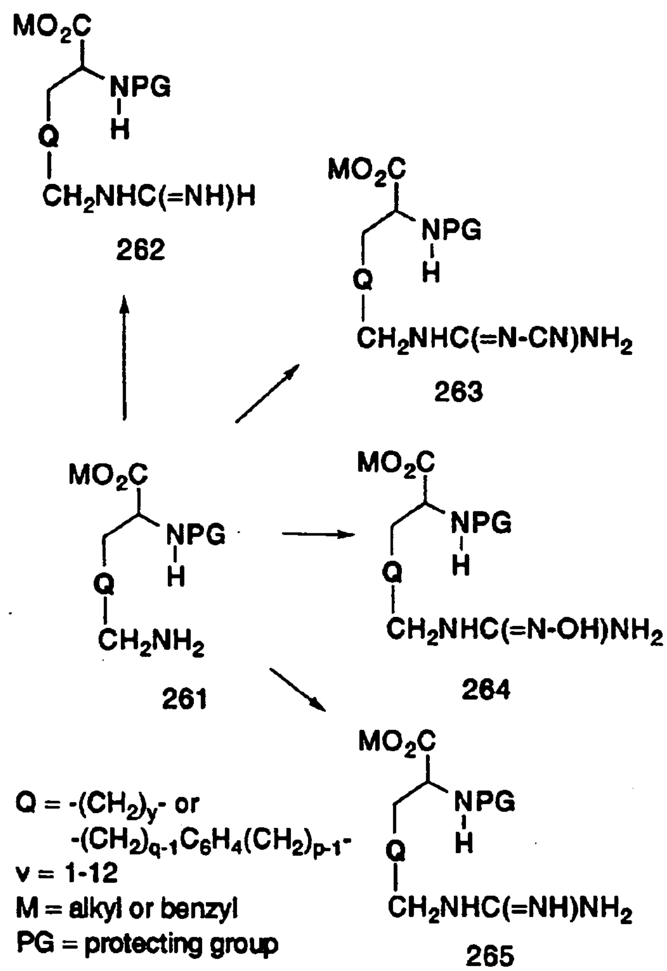
SCHEME 42: Alternative Preparations of Imidazolines.



The several types of inhibitors disclosed in this invention can be broadly classified by their electrophilic functional group A, as defined in Formula (I). The compounds described below, unlike the boron containing peptides, utilize a highly electrophilic carbon atom at A to interact with the active site serine of thrombin. The precursor for the electrophilic carbon

inhibitors is the appropriately protected amino acid (261) of Scheme 43.

Scheme 43

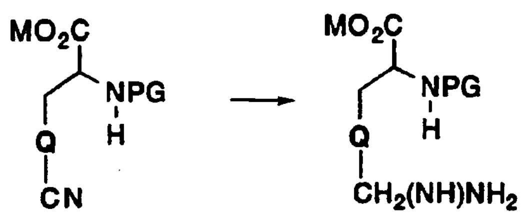


The preparation of (261) can be found in the general chemical literature, one such reference being the review by Morrison and Mosher (1976). According to Scheme 43 various terminal functional groups are available from (261) : the formamidino- (262), cyanoguanidino- (263), hydroxyguanidino- (264) and guanidino- analogs (265).

The preparation of amidine derivative (267) and phenylguanidines of formula (269) from amino acids (266)

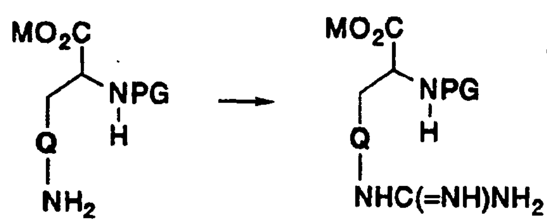
and (268), respectively, is shown in Scheme 44. The conditions used to prepare amidines of formula (267) is discussed for (303) of Scheme 53 while the method for formamidinylation of (268) to give (269) is the same as that described to prepare (295) of Scheme 52.

Scheme 44.



266 267

$Q = -(CH_2)_y-$ or $-(CH_2)_{q-1}C_6H_4(CH_2)_{p-1}-$



268 269

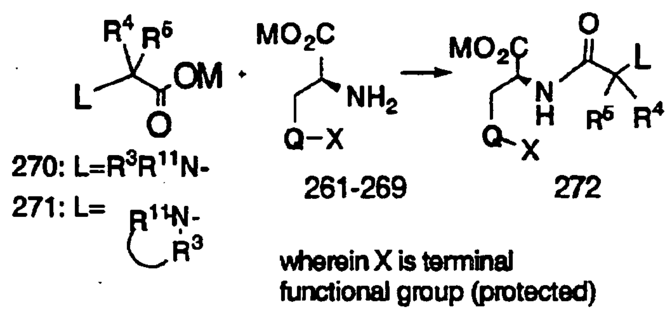
$Q = -(CH_2)_{q-1}C_6H_4-$

v = 1-12
M = alkyl or benzyl
PG = suitable amine protecting group

As shown in Scheme 45, appropriately protected derivatives of formulae (261-269), wherein M is an alkyl or benzyl group can be coupled with *N,N*-disubstituted acid (270) or (271) (wherein M is hydrogen). The X

group in compounds of formulae (261) through (269) and (272) in Scheme 45, as well as in compounds illustrated in the Schemes to follow, is a protected version of the terminal functional group X, as defined by Formula (I), unless deprotection is indicated to obtain the final compound of the sequence.

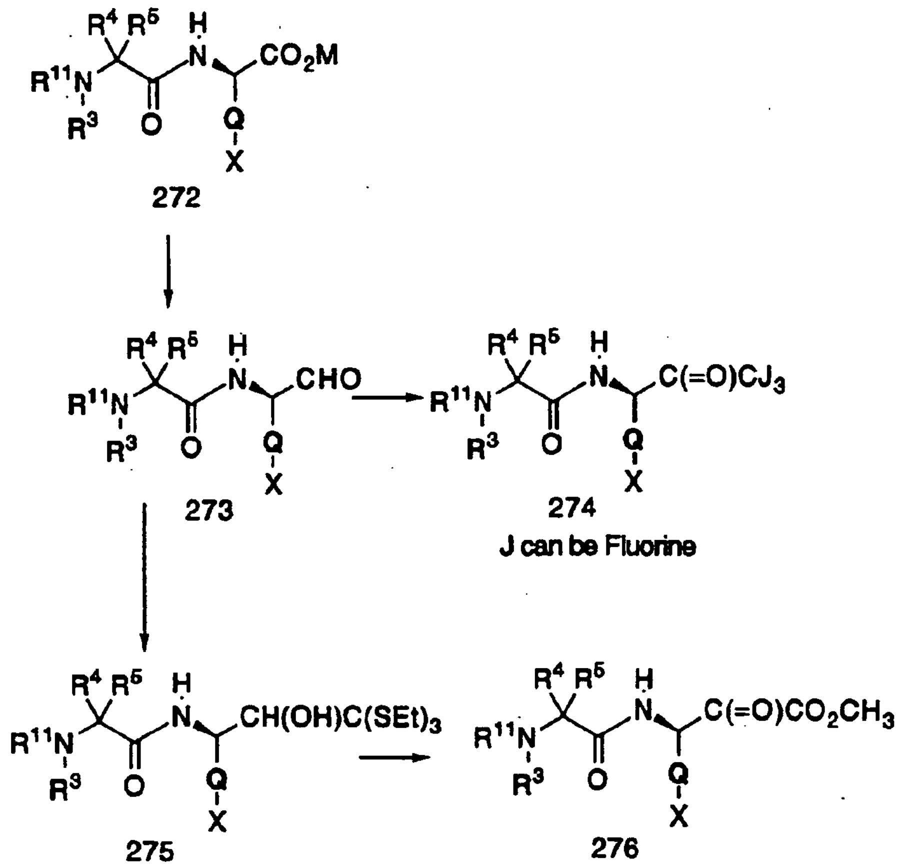
Scheme 45.



It is understood that the protecting group(s) used should compatible with the conditions of the process discussed; a good source for information on protecting group chemistry is Greene and Wuts (1991).

The preparation of the thrombin inhibitors trihalomethyl ketone (274) and α-ketoester (275) are shown in Scheme 46. The coupled ester (272), wherein M is alkyl or benzyl can be converted to the acid (M is hydrogen) by the methodology appropriate for the particular ester functionality as described in Greene and Wuts (1984). The aldehyde (273) can be prepared by selective reduction of the acid (272, M is hydrogen) to the primary alcohol followed by oxidation.

Scheme 46.



To obtain the primary alcohol, the acid can be transformed to the mixed anhydride by condensation of the trialkylammonium salt of the acid with an alkyl- or arylchloroformate in an inert non-polar solvent such as tetrahydrofuran, 1,2-dimethoxyethane or toluene at -78°C to room temperature. The solution of the resulting mixed anhydride is filtered and reduced to the peptidyl alcohol with an excess of a borohydride reducing agent in a compatible solvent like water or an alcohol at -78°C to room temperature according to the method of Rodriguez et. al., *Tetrahedron Lett.* **32**, 923 (1991). The peptidyl alcohol can be oxidized to aldehyde (273) without over oxidation by a variety of procedures, as

detailed by Hudlicky in *Oxidations in Organic Chemistry*, American Chemical Society, p. 114 (1991); the preferred methods include Swern oxidation described by Omura and Swern, *Tetrahedron* **34**, 1651 (1978); and the Pfitzner-Moffat oxidation described by Fearon et al.in *J. Med. Chem.* **30**, 1617 (1987). A two step protocol reported by Edwards, *Tetrahedron Lett.* **33**, 4279 (1992) can be used to prepare the trifluoromethyl ketones (274) (J is fluorine) from aldehyde (273). In this procedure a metallated trifluoromethyl anion is generated from an excess of trifluoromethyliodide or -bromide and an active metal such as zinc, magnesium, lithium or cadmium in inert, anhydrous solvents like tetrahydrofuran or N,N-dimethylformamide at temperatures of -100°C up to the reflux point of the solvent. Alternatively, the metalated trifluoromethyl anion may be generated by the transmetallation of trifluoromethyliodide or -bromide with an organometallic compound such as a Grignard reagent or alkyllithium compound in an inert solvent like tetrahydrofuran, hexane or ether at temperatures ranging from -78°C up to the reflux point of the selected solvent. Aldehyde (273) can be added to the solution of the metalated trifluoromethyl anion to form the trifluoroethanol derivative at temperatures of -100°C or higher. To obtain the trifluoromethyl ketone (274) where J is fluoro, the alcohol is oxidized by the Pfitzner-Moffat or Swern procedure. Removal of the protecting group(s) on terminal group X by the appropriate method will provide the thrombin inhibitors of formulae (274).

Trihalomethyl analogs of (274), where J is fluoro can also be prepared from aldehyde (273) by a different method. The trihalomethyl ketones are prepared by treating aldehyde (273) with either the trimethylsilyl trihaloacetate or the potassium or sodium trihaloacetate in a polar solvent such as an alcohol, *N,N*-

dimethylformamide or methylsulfoxide with or without a base such as a trialkyl amine, potassium carbonate or sodium hydroxide at temperatures of -78°C or higher according to the method of Beaulieu, *Tetrahedron Lett.* **32**, 1031 (1991); Shell Int. Res., European Patent Application EP 16504). The resulting $\alpha\alpha\alpha$-trihaloethanol is oxidized and group X can be deprotected as above to give the thrombin inhibitors or formulae (274).

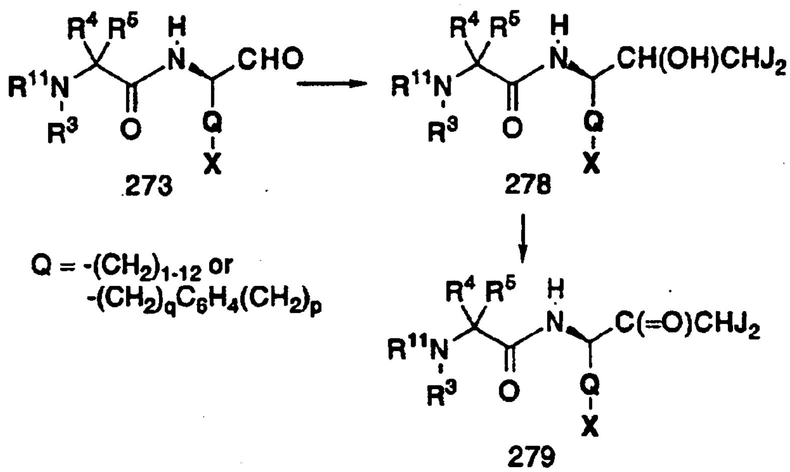
The α-ketoester thrombin inhibitors, exemplified by (276), are prepared according to a route disclosed by Iwanowicz et. al. in *Bioorgan. Med. Chem. Lett.* **12**, 1607 (1992). The tris(ethylthio)methyl anion is added to the peptidyl aldehyde (273) in a solvent such as tetrahydrofuran, 1,2-dimethoxyethane or toluene at -100°C or higher to give the alcohol (275). The α-hydroxyl ester is generated from (275) by treatment with a mixture of mercuric salts, such as mercuric chloride and mercuric oxide, in an alcohol or water. Swern or Pfitzner-Moffat oxidation of the α-hydroxyl ester followed by the deprotection of substituent X protecting group provides thrombin inhibitors of formula (276).

Another method for the preparation of compound (276) substitutes a 1-lithio-1-alkoxyethene or 1-magnesio-1-alkoxyethene for the tris(ethylthio)methyl anion of Scheme 15 in an addition reaction with peptidyl aldehyde (273). There can be obtained an adduct analogus to the tris(ethylthio)hydroxyethyl compound (275) when excess 1-magnesio- or 1-lithio-1-alkoxyethene anion is stirred at temperatures ranging from -100 °C to ambient temperature with (273) in anhydrous solvents such as diethyl ether or tetrahydrofuran. This alkoxyolefin product may then be transformed to (276) by oxidative cleavage with reagents such as ozone or periodate in an inert solvent such as a halohydrocarbon, lower alkyl ketone, an alcohol or water at temperatures

ranging from -100 °C to ambient temperature, followed by oxidation of the intervening α-hydroxyester and deprotection as described above.

The preparation of the α,α-dihalomethylketone thrombin inhibitors of this invention is outlined in Scheme 47.

Scheme 47.

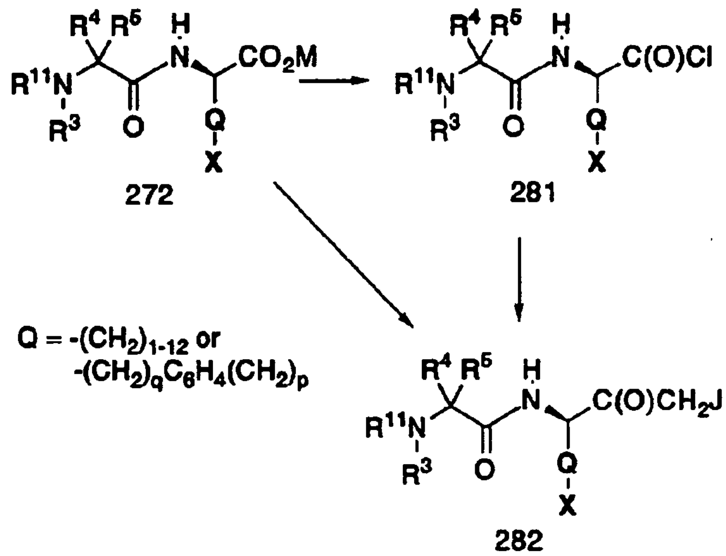


The α,α-dihalomethylketone (279), where J is fluoro can be prepared from the aldehyde (273) by selective reaction of the aldehyde with the anion of the corresponding dihalomethane. The metalated dihalomethane anion is generated from one equivalent each of a strong hindered base, such as lithium tetramethylpiperidide or *tert*butyllithium, and the selected dihalomethane in an anhydrous, inert solvent like tetrahydrofuran or 1,2-dimethoxyethane at -100°C or higher according to the method of Taguchi et. al. *Bull. Chem. Soc. Jpn.*, **50**, 1588 (1977). The metalated dihalomethane anion can be added to the aldehyde (273) at -100°C or higher. Alternatively, the dihalomethane anion is generated from a dihalomethyl(trimethyl)silane

and an anhydrous fluoride ion source such as tris(diethylamino)sulfonium difluoromethyl silicate in an inert solvent like benzene, acetonitrile or tetrahydrofuran at -78°C or higher, then (273) can be added to give dihaloethanol (278) according to the method of Fujita and Hiyama, *J. Am. Chem. Soc.* **107**, 4085 (1985). The resulting dihaloethanol can be oxidized to ketone (279) by the Swern or Pfitzner-Moffat procedure. Removal of the protecting group(s) on substituent X of (279) gives the *α,α*-dihalomethylketone thrombin inhibitors.

α-Halomethylketone thrombin inhibitors can be prepared by the process illustrated in Scheme 48. The acid chloride (281) can be prepared from acid (272), wherein M is hydrogen or its trialkylammonium, sodium or potassium salt with a chlorinating agent such as thionyl chloride, oxalyl chloride or dichloromethylmethyl ether in a solvent like tetrahydrofuran or dichloromethane with or without a catalytic amount of *N,N*-dimethylformamide at -78°C or higher. Alternatively, the mixed anhydride of (272) may be prepared as described for (272) in Scheme 46. Compound (281) or the mixed anhydride of (272) can be treated with an ether solution of diazomethane and either anhydrous hydrogen fluoride or hydrogen chloride gas according to that described by McPhee and Klingsbury, *Org. Synth. Coll.* **III**, 119 (1955); or hydrogen bromide according to the method Miescher and Kaji, *Helv. Chim. Acta.* **24**, 1471 (1941).

Scheme 48.

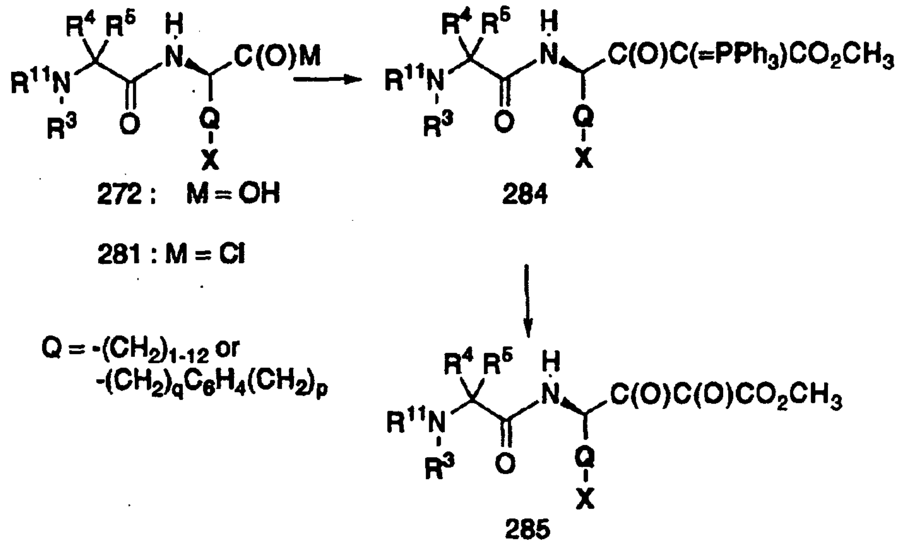


Selection of the hydrogen fluoride gas will give the α-fluoromethylketone analog, (282) wherein J is fluoro; and hydrogen chloride gas gives the α-chloromethylketone analog (282) wherein J is chloro. Deprotection of X gives the corresponding thrombin inhibitors of (282).

The general preparative route for the αβ-diketoester, -amide and -ketone thrombin inhibitors of this invention is exemplified in Scheme 49. Compound (281) or the mixed anhydride of (272) can be reacted with a Wittig reagent such as methyl (triphenyl-phosphoranylidene)acetate in a solvent like tetrahydrofuran or acetonitrile at temperatures ranging from 0°C to the reflux point of the solvent to give (284). Oxidative cleavage of the phosphoranylidene (284) with an oxidizing agent like ozone or OXONE™ in an inert solvent such as tetrahydrofuran, dichloromethane or water at temperatures of -78°C or higher gives the vicinal tricarbonyl compound (285), analogous to that described by Wasserman and Vu,

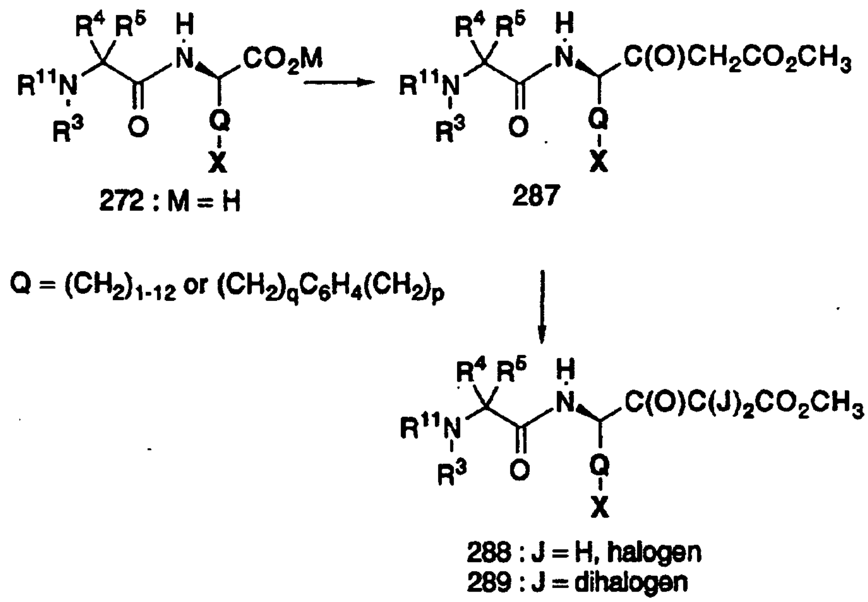
Tetrahedron Lett. 31, 5205 (1990). Cleavage of the protecting group can provide thrombin inhibitors of formula (285).

Scheme 49.



The preparative routes for the synthesis of the α-mono- and $\alpha\alpha$-dihalo-β-ketoester -amide and ketone thrombin inhibitors of this invention are summarized in Scheme 50. The exemplified β-ketoester (287) is available from the acid derivative (272). The acid (272) can be treated with carbonyl diimidazole in an inert solvent such as tetrahydrofuran or dichloromethane at 0°C or higher to form the acyl imidazole. This acyl imidazole, or the mixed anhydride of (272), can be further reacted with lithioethylacetate in solvents such as 1,2-dimethoxyethane or tetrahydrofuran/hexane at temperatures ranging from -100°C to ambient temperature, according to the method of Dow, *J. Org. Chem.* 55, 386 (1990) to give β-ketoester (287).

Scheme 50.



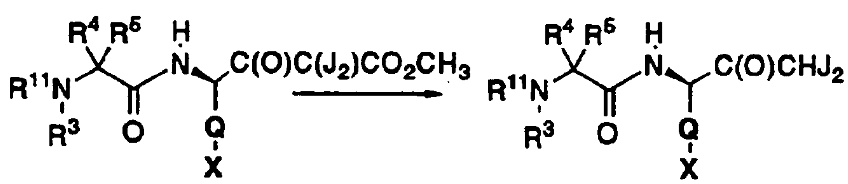
Compound (287) serves as a substrate for both mono- and dihalogenation. The α-monochloro analog of (288), where J is each chlorine and hydrogen, can be prepared by controlled halogenation reactions with reagents like N-chlorosuccinimide or thionyl chloride in an inert halogenated solvent and at temperatures ranging from -20°C to the reflux point of the selected solvent according to the methods of Uhle, *J. Am. Chem. Soc.* **83**, 1460 (1961); and DeKimpe et. al., *Synthesis* **2**, 188 (1987). The $\alpha\alpha$-dihalo analog (289) where J is chloro is available from halogenation with molecular chlorine in a halogenated solvent at temperatures of -20°C or higher according to the method of Bigelow and Hanslick, *Org. Syn. Coll.* **II**, 244 (1943). Reagents such as N-fluorobis[(trifluoromethyl)sulfonyl]imide are useful for the preparation of mono- and difluoro analogs (288) and (289) by reacting the appropriate stoichiometry of this

reagent with (287) in a halogenated solvent at temperatures of -78°C or higher according to the method of Resnati and DesMarteau, *J. Org. Chem.* **56**, 4925 (1991). Deprotection of substituent X of the halogenation products (288) and (289) can provide the corresponding thrombin inhibitors.

Compounds of formula (287) also serves as a substrate for the preparation of tricarbonyl derivatives such as (285) (Scheme 49). Condensation of (287) with an aldehyde, such as benzaldehyde, gives an β-ene-α,γ-dione. This ene-dione can be oxidatively cleaved with reagents like ozone or periodate to give tricarbonyl analog (285).

The preparation of the mono- and dihalomethylketone thrombin inhibitors is outlined in Scheme 51. The intermediates formed in the preparation of the α-mono- and α,α-dihalo-β-ketoester thrombin inhibitors of Scheme 49 can be used in these preparations.

Scheme 51.



288 : J = halogen, H
289 : J = dihalogen

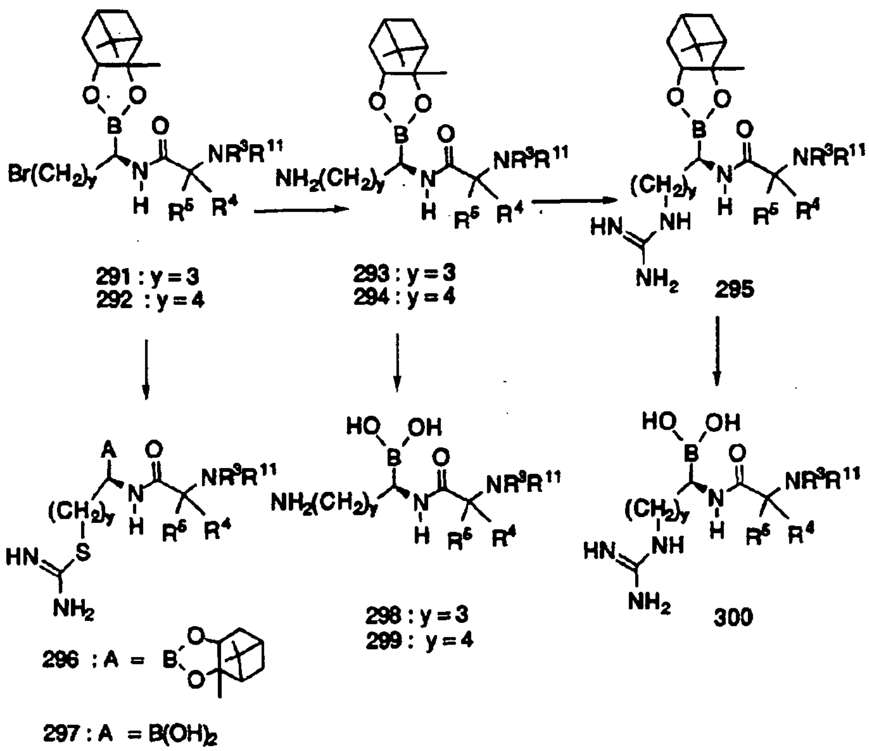
282: J = dihalogen
279 : J = halogen, H

The decarboxylation of these halogenation products, (288) and (289), can be effected by saponification of the ester with mild aqueous base such as potassium carbonate or sodium hydroxide in water miscible solvents like an alcohol, tetrahydrofuran or *N,N*-dimethylformamide, followed by adjusting the pH to a range of 4 to 6. This mixture can be either stirred at

ambient temperatures or heated at various temperatures up to the reflux point of the solvent chosen until the formation of (279) or (282) is complete and is similar to that reported in Matsuda et. al., *Tetrahedron Lett.* **30**, 4259 (1989). Removal of protecting group(s) can provide thrombin inhibitors corresponding to (279) or (282).

A process for the preparation of the boropeptide thrombin inhibitors of this invention from intermediates (291) and (292) is disclosed in Scheme 52. Compound (291) serves as a starting point for isothiouronium thrombin inhibitors (296) and (297). The boronic ester (296) is prepared by stirring a solution of (291) and thiourea in an inert polar solvent, such as an alcohol or *N,N*-dimethylformamide, at temperatures ranging from ambient to the reflux temperature of the selected solvent. It is understood that a boronic acid ester like compound (296) is an effective thrombin inhibitor, however, it may be transformed to the corresponding free boronic acid (297) without a loss of biological activity. Compound (297) is derived from the boron ester (296) by transesterification under equilibrium conditions.

Scheme 52



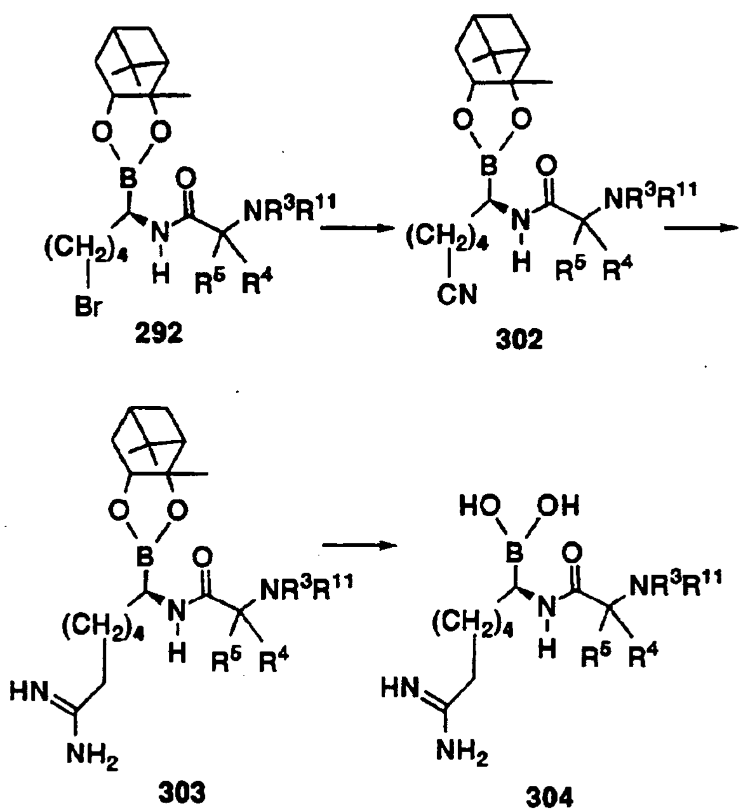
Thus stirring ester (296) with an excess of an alkyl- or aryl boric acid in a biphasic mixture of neutral or acidic water and an immiscible solvent, such as ethyl ether or toluene, gives (297) after several hours at ambient temperature. The conditions generally preferred use 5 to 10 equivalents of phenylboric acid in ethyl ether/water at neutral pH. Thrombin inhibitors (293) to (299) are obtained by reduction of an azide intermediate prepared from (291) or (292). The azide intermediate is prepared by heating either (291) or (292) with an inorganic azide, such as sodium or potassium azide, in an anhydrous polar aprotic solvent, such as acetone, dimethylformamide or methyl sulfoxide at temperatures ranging from ambient to 130°C. Alternatively, phase transfer conditions may be employed to prepare the azide intermediate from (291) or (292). For example, a

tetraalkylammonium azide in a non-polar aprotic solvent, such as tetrahydrofuran or toluene, or a crown ether and inorganic azide in biphasic mixtures of water and an immiscible solvent, such as benzene, toluene or xylene, can be stirred at room temperature or heated up to the reflux point of the selected solvent. The primary amines (293) and (294) are most conveniently obtained from the catalytic hydrogenation of the azide in an inert solvent, such as an alcohol, ethyl acetate or tetrahydrofuran with a transition metal catalyst such as platinum or palladium on carbon under an atmosphere of hydrogen gas. A variety of alternative methods are also useful and can be found in the monograph by Hudlicky (1984, pp. 76). The acid salt of the resulting amines (293) and (294) may be formed by the addition of one equivalent of the desired acid to the hydrogenation mixture. Phenylboric acid mediated hydrolysis of esters (293) and (294) gives the free boronic acid thrombin inhibitors (298) and (299), compounds of formula (I) of the invention.

Compounds containing a primary guanidine or *N*-alkyl guanidine functionality may be prepared by the alternative process outlined in Scheme 52. As illustrated with primary amine (293), the transformation to (295) is effected with a guanidinylation agent, such as an S-alkyl thiourea, aminoiminomethane sulfonic acid reported by Miller and Bischoff *Synthesis* **9**, 777 (1986), cyanamide reported by Kettner et al. (1990) or their N-alkyl derivatives. This mixture is stirred at room temperature or higher with a base, such as potassium carbonate, triethylamine or *N,N*-dimethylaminopyridine in an inert solvent like water, alcohol, *N,N*-dimethylformamide or acetone. The guanidine boronic acid esters (295) can be deesterified to give the corresponding boronic acid (300) by the phenylboric acid procedure described above.

According to Scheme 53, the bromide (292) is converted to the corresponding alkylnitrile (302) upon exposure to the cyanide anion under a variety of conditions.

Scheme 53



Effective methods include the use of potassium or sodium cyanides in polar aprotic solvents, such as *N,N*-dimethylformamide, methylsulfoxide, acetone or ethylmethyl ketone, at temperatures ranging from ambient up to the reflux point of the selected solvent. More useful, however, are conditions employing phase transfer agents such as tetrabutylammonium cyanide in a nonpolar aprotic solvent such as tetrahydrofuran or toluene; or a

biphasic mixture of a crown ether and an inorganic cyanide in water with an immiscible solvent like benzene, toluene or xylene. These mixtures can be stirred at ambient temperature or heated up to the reflux temperature of the selected solvent. An amidine like (303) is prepared by first treating nitrile (302) with a saturated solution of a mineral acid such as hydrogen chloride in an alcohol solvent at room temperature or lower. The intermediate O-alkylimidate can be exposed to ammonia, or a primary or secondary amine under anhydrous conditions with or without an inert solvent. As illustrated in Scheme 5, compound (303) is produced by treating the O-alkylimidate formed from (302) with neat anhydrous ammonia at reflux. The free boronic acid (304) is obtained by transesterification of (303) with phenylboric acid in a mixture of water and diethyl ether.

EXAMPLE 1: N^1-(4-Phenylbenzoyl)boroarginine (+)-Pinanediol, Bisulfite

Part A: <u>(+)-Pinanediol 4-bromo-1(*R*)-(4-phenylbenzoyl)aminobutane-1-boronate</u>. To a solution of (+)-pinanediol 4-bromo-1(*R*)-aminobutane-1-boronate hydrochloride (5.00 g, 13.6 mmol) in dichloromethane (50 mL) at 0 °C was added 4-phenylbenzoyl chloride (4.97 g, 22.9 mmol) followed by *N*-methylmorpholine (4 mL, 36 mmol). After 1 hour, the cooling bath was removed and the mixture stirred at room temperature for 2 hours. The mixture was then diluted with ethyl acetate and washed with 0.1 *M* hydrochloric acid, saturated sodium bicarbonate and saturated sodium chloride. The organic phase was dried over anhydrous magnesium sulfate, filtered and the filtrate concentrated *in vacuo* to afford 3.37 g (48%) of the desired amide, mass spectrum: $(M+H)^+ = 510/512$; ^1H NMR (300 MHz, $CDCl_3$) δ7.9 (2H, d, J = 8.3), 7.84 (1H, bs), 7.6 (2H, d, J = 8.3), 7.44 (5H, m), 4.37 (1H, m), 3.41 (1H, t, J = 6.9), 2.0 (10H, m) 1.49 (3H, s), 1.38 (1H, m), 1.29 (3H, s), 0.91 (3H, s).

Part B: <u>(+)-Pinanediol 4-azido-1(*R*)-(4-phenylbenzoyl)aminobutane-1-boronate</u>. To a solution of (+)-pinanediol 4-bromo-1(*R*)-(4-phenylbenzoyl)aminobutane-1-boronate (3.37 g, 6.60 mmol) in dimethylformamide (6 mL) was added sodium azide (547 mg, 8.41 mmol). The resulting mixture was heated at 70 °C for 2 hours, cooled to room temperature, and diluted with ethyl acetate. The mixture was then washed with water, saturated sodium chloride and dried over anhydrous magnesium sulfate. Filtration, followed by concentration of the filtrate *in vacuo* gave 3.04 g (97%) of the desired azide, mass spectrum: $(M+H)^+ = 473$; ^1H NMR (300 MHz, $CDCl_3$) δ7.89 (2H, d, J = 8.3), 7.75 (1H,

bs), 7.3 (7H, m), 4.32 (1H, m), 3.32 (1H, m), 2.0 (10H, m) 1.48 (3H, s), 1.3 (4H, m), 0.9 (3H, s).

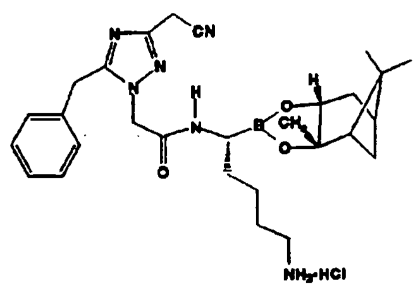
Part C: <u>N^1-(4-Phenylbenzoyl)boroornithine (+)-pinanediol, hydrochloride</u>. To a solution of (+)-pinanediol 4-azido-1(*R*)-(4-phenylbenzoyl)aminobutane-1-boronate (3.04 g, 6.44 mmol) in methanol (30 mL) was added Pearlman's catalyst ($Pd(OH)_2/C$, 200 mg) and 1 *M* hydrochloric acid (6.5 mL, 6.5 mmol). The mixture was placed on a Parr apparatus and hydrogenated at 50 psi for 3 hours. The mixture was filtered using Celite™, washed with methanol and the filtrate concentrated *in vacuo*. The resulting amorphous solid was dissolved in water and washed with ether. The aqueous phase was then concentrated *in vacuo* and crystallized from ethyl acetate-hexanes, giving 1.52 g (49%) of the desired amine hydrochloride, mass spectrum: $(M+H)^+ = 447$; mp: 157-170 °C; ^1H NMR (400 MHz, $CDCl_3/DMSO\text{-}d_6$) δ9.88 (1H, bs), 8.18, (2H, d, J = 8.3), 8.13 (3H, bs), 7.68 (2H, d, J = 8.3), 7.61 (2H, d J = 7.0), 7.45 (2H, d, J = 7.0), 7.37 (1H, d, J = 7.30), 4.20 (1H, d, J = 6.3), 2.99 (1H, m), 2.87 (2H, m), 2.31 (1H, m), 2.13 (1H, m), 1.84 (7H, m), 1.56 (1H, d, J = 10.0), 1.42 (3H, s), 1.29 (3H, s), 0.89 (3H, s).

Part D: <u>N^1-(4-Phenylbenzoyl)boroarginine (+)-pinanediol, bisulfite</u>. To a solution of N^1-(4-phenylbenzoyl)boroornithine (+)-pinanediol, hydrochloride (80 mg, 0.17 mmol) in ethanol (2 mL) was added 4-dimethylaminopyridine (40 mg, 0.33 mmol). After 15 minutes, aminoiminomethanesulfonic acid (40 mg, 0.32 mmol) was added and the resulting mixture heated at reflux for 3 hours. After cooling to room temperature, the mixture was filtered and the filtrate concentrated *in vacuo*. The residue was dissolved in chloroform and washed with 0.1 *M* hydrochloric acid, water and dried

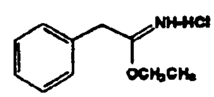
over anhydrous magnesium sulfate. Filtration, followed by concentration of the filtrate *in vacuo* afforded 73 mg (84%) of the desired guanidine, mass spectrum: $(M+H)^+$ = 489; ^1H NMR (400 MHz, $CDCl_3$, 60 °C) δ9.48 (1H, bs), 8.10 (2H, d, J = 8.1), 8.07 (1H, bs), 7.75 (1H, bs), 7.54 (2H, d, J = 8.3), 7.48 (2H, d, J = 7.0), 7.35 (3H, m), 7.06 (4H, bs), 4.19 (1H, bd, J = 8.3), 3.1 (2H, m), 2.84 (1H, m), 2.29 (1H, m), 2.12 (1H, m), 1.96 (1H, m), 1.75 (6H, m), 1.47 (1H, d, J = 10.2), 1.40 (3H, s), 1.24 (3H, s), 0.83 (3H, s).

EXAMPLE 34: (+)-Pinanediol 4-(Formamidino)thio-1(*R*)-(4-phenylbenzoyl)aminobutane-1-boronate, Hydrobromide

<u>(+)-Pinanediol 4-(formamidino)thio-1(*R*)-(4-phenylbenzoyl)aminobutane-1-boronate, hydrobromide</u>. To a solution of (+)-pinanediol 4-bromo-1(*R*)-(4-phenylbenzoyl)aminobutane-1-boronate (200 mg, 0.392 mmol) in methanol (3 mL) was added thiourea (120 mg, 1.58 mmol). The reaction was stirred at room temperature for 3 days. The mixture was concentrated *in vacuo*, the residue dissolved in water and washed with ether. Concentration of the aqueous portion afforded 80 mg (35%) of the desired isothiourea, mass spectrum: $(M+H)^+$ = 506; ^1H NMR (300 MHz, $CDCl_3$) δ8.15 (2H, d, J = 8.4), 7.61 (2H, d, J = 8.4), 7.52 (2H, m), 7.38 (3H, m), 6.47 (1H, bs), 4.23 (1H, dd, J = 6.6, 1.9), 3.24 (1H, m), 3.14, (1H, m), 2.96, (1H, m), 2.32 (1H, m), 2.15 (1H, m), 1.99 (1H, m), 1.78 (6H, m), 1.48 (1H, d, J = 10.1), 1.42 (3H, s), 1.27 (3H, s), 0.86 (3H, s).

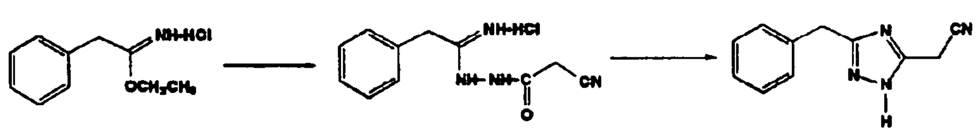


EXAMPLE 898: R-N^1-(3-Cyanomethyl-5-phenylmethyl-1,2,4-triazol-1-yl)acetyl-borolysine, (+)-pinanediol ester, hydrochloride; X = -CH_2NH_2, R^{13} = -CH_2Ph, R^{14} = -CH_2CN, Y^1,Y^2 = (+)-pin.



Part A. Ethyl benzylimidate, hydrochloride.

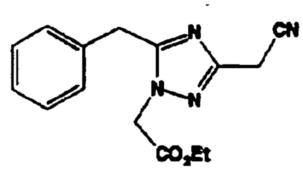
HCl gas (17.1 g, 469 mmol, 1.1 eq) was slowly bubbled into a solution of phenylacetonitrile (50.00 g, 427 mmol, 1 eq) in ethanol (27.6 mL, 469 mmol, 1.1 eq) at 0 °C. The reaction was put into the refrigerator over the weekend. After warming to room temperature, ether (300 mL) was added to the reaction mixture which had solidified and the contents were vigorously stirred at 0 °C to pulverize the mixture. The solid material was filtered while cold under an inert atmosphere and the filter cake rinsed with some more ether. The product was dried under high vacuum to yield 60.0 g (mp 94.0-95.0 °C) of a white solid. A second crop yielded 20.98 g (96.0-97.5 °C).



Part B. 3-Cyanomethyl-5-phenylmethyl-1,2,4-triazole.

The imidate from part A (14.92 g, 91 mmol, 1 eq) was dissolved in ethanol (250 mL) and cooled to 0 °C

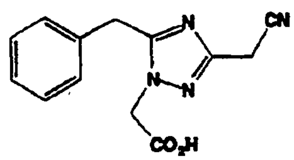
under an inert atmosphere. Cyanoacetohydrazide (9.06 g, 91 mmol, 1 eq) dissolved as best possible in warm ethanol was added, and the resultant mixture stirred at room temperature overnight. The mixture was filtered, and the filtrate concentrated to yield a gummy orange solid. Trituration from hexanes yielded 19.72 g of solid product acylamidrazone (MS detects $(M+H)^+ = 216$). This intermediate was heated neat (oil bath) at 170 °C under an inert atmosphere for 0.5 h to crack out water. The product was cooled to room temperature and dissolved in ethyl acetate. The solvent was dried (MgSO4) and stripped to yield 11.89 g of an orange solid. Flash chromatography over silica gel in solvent systems consisting of 3:1 pentane/ethyl acetate to 100% ethyl acetate to 4:1 chloroform/methanol yielded 6.76 g (38%) of a light pink solid product; m.p. = 140.0-142.5 °C. NMR (DMSO-d_6) ∂ 14.00-13.60 (bs, 1H); 7.40-7.10 (m, 5H); 4.08 (s, 2H); 4.05 (s, 2H). MS: $(M+H)^+ = 199$.



Part C. Ethyl (3-cyanomethyl-5-phenylmethyl-1,2,4-triazol-1-yl)acetate.

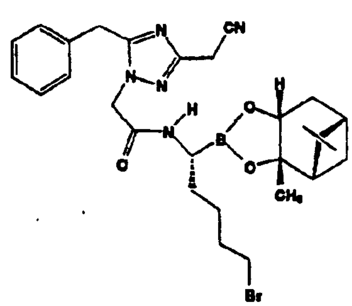
The compound from part B (3.36 g, 17 mmol, 1 eq) was added portionwise to a mixture of DMF and 50 % NaH (0.81 g, 17 mmol, 1 eq) at 25 °C. After H_2 evolution had ceased, the mixture was heated a little with a heat gun to ensure complete deprotonation. The mixture was cooled to 0 °C and ethyl bromoacetate (1.88 mL, 17 mmol, 1 eq) was added. The reaction was allowed to warm to room temperature and was stirred overnight. Ethyl acetate was added and the mixture washed with water (5x) to remove the DMF. The organic layer was dried ($MgSO_4$) and stripped to yield 6.10 g of a reddish

oil. Flash chromatography in 3:1 hexanes/ethyl acetate to 1:1 hexanes/ethyl acetate yielded 2.93 g of an amber oil which consisted of a 4:1 mixture of regioisomers as determined by NMR with the major isomer being depicted above. NMR (major isomer) ($CDCl_3$) ∂ 7.40-7.20 (m, 5H); 4.68 (s, 2H); 4.25-4.05 (m, 4H); 3.84 (s, 2H); 1.23 (t, 3H, J=7 Hz).



Part D. <u>(3-Cyanomethyl-5-phenylmethyl-1,2,4-triazol-1-yl)acetic acid.</u>

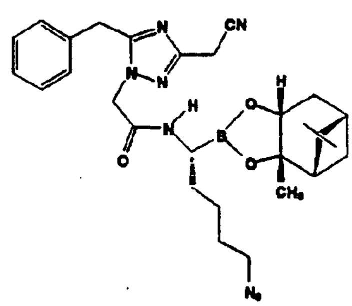
The product of part C (1.00g, 3.52 mmol, 1 eq), 1.000 N NaOH (7.03 mL, 7.03 mmol, 2 eq) and methanol (10 mL) were mixed and stirred at room temperature. After 24h, the methanol was stripped and the aqueous mixture washed with ether (2x). The aqueous layer was then acidified with conc. HCl and extracted with ethyl acetate (3x). The organic layers were combined, dried ($MgSO_4$) and stripped to yield 0.66 g of an off-white glass. MS $(M+H)^+$ = 257.



Part E. <u>(+)-Pinanediol 5-bromo-1(R)-((3-Cyanomethyl-5-phenylmethyl-1,2,4-triazol-1-yl)acetamido)pentane-1-boronate.</u>

N-methylmorpholine (0.42 mL, 3.86 mmol, 1.5 eq) was added to a solution of the product in part D (0.66 g,

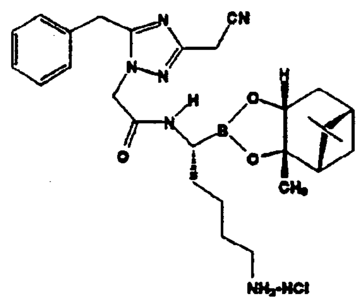
2.58 mmol, 1 eq) in THF at 25 °C. The mixture was cooled to -20 °C and isobutylchloroformate (0.50 mL, 3.86 mmol, 1.5 eq) in THF was added dropwise. In a seperate flask, pinanediol 5-bromo-1-R-aminopentane-1-boronate hydrochloride (0.98 g, 2.58 mmol, 1 eq) was dissolved in $CHCl_3$ and cooled to -78 °C. Triethylamine (0.36 mL, 2.58 mmol, 1 eq) was then added and the mixture syringed immediately into the reaction flask with the mixed anhydride. The reaction was allowed then to warm to room temperature overnight. The next day, the precipitate was filtered off and the solids were rinsed with THF. The filtrate was stripped to yield 410 mg of a white oil. Flash chromatography over silica gel in solvent systems consisting of 3:1 pentane/ethyl acetate to 100% ethyl acetate to 4:1 chloroform/methanol yielded 300 mg of a clear, colorless viscous oil and only one regioisomer by NMR. MS $(M+H)^+$ = 633 and 635. NMR ($CDCl_3$) ∂ 7.40-7.10 (m, 5H); 6.13 (d, 1H, J=6 Hz); 4.62 (s, 2H); 4.40-4.20 (m, 1H); 4.17 (s, 2H); 3.86 (s, 1H); 3.50-3.20 (m, 3H); 2.40-2.10 (m, 2H); 2.10-1.75 (m, 4H); 1.75-1.10 (m, 13 H); 0.83 (s, 3H).



Part F. <u>(+)-Pinanediol 5-azido-1(R)-((3-Cyanomethyl-5-phenylmethyl-1,2,4-triazol-1-yl)acetamido)pentane-1-boronate.</u>

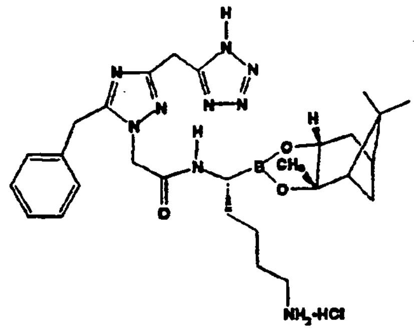
The product from Part E (300 mg, 0.52 mmol, 1 eq), sodium azide (1.03 mmol, 2 eq), and DMSO (5 mL) were mixed and stirred at room temperature under an inert atmosphere for 24 h. Ethyl acetate was added and the

mixture rinsed with water (5x). The ethyl acetate layer was dried (MgSO4) and stripped to yield 256 mg of a light amber oil. IR (neat) 2096 cm-1. NMR (CDCl3) ∂ 7.40-7.10 (m, 5H); 6.15 (d, 1H, J=6 Hz); 4.62 (s, 2H); 4.40-4.20 (d of d, 1H, J=7, 2 Hz); 4.20-4.10 (m, 2H); 3.85 (s, 2H); 3.40-3.10 (m, 3H); 2.50-1.40 (m, 9H); 1.40-1.00 (m, 9 H); 0.84 (s, 3H).

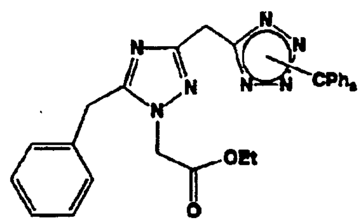


Part G. (+)-Pinanediol 5-amino-1(R)-((3-Cyanomethyl-5-phenylmethyl-1,2,4-triazol-1-yl)acetamido)pentane-1-boronate, hydrochloride salt.

The product from Part F (250 mg, 0.46 mmol, 1 eq) and triphenylphosphine (157 mg, 0.6 mmol, 1.3 eq) and THF (5 mL) were mixed and stirred at room temperature. After 1 h, water (11 µM, 0.6 mmol, 1.3 eq) was added and the mixture stirred overnight. After 24 h, the reaction was not finished, and thus 1.3 eq more equivalents of water were added and the reaction stirred for another 24 h. The reaction was now complete and 1 equivalent of 1.000 N HCl was added. The reaction was then stripped and water was added and the reaction again stripped. Ethyl ether was added and the mixture stripped once more. The residue was dried under high vacuum to yield 138 mg of a white glass. MS detects $(M+H)^+$ = 519 and 385 (minus pinanediol). Mass calculated for $C_{28}H_{40}BN_6O_3$: 519.3255. Found: 519.3274. NMR shows a 1:1 mixture of pinanediol ester and free boronic acid.



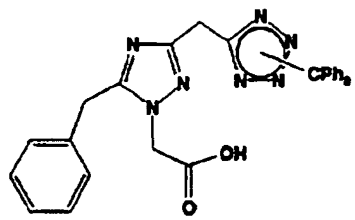
EXAMPLE 908: R-N^1-(3-(1H-tetrazol-5-yl)methyl-5-phenylmethyl-1,2,4-triazol-1-yl)acetyl-borolysine, (+)-pinanediol ester, hydrochloride; X = $-CH_2NH_2$, R^{13} = $-CH_2Ph$, R^{14} = $-CH_2-(CN_4H)$, Y^1,Y^2 = (+)-pin.



Part A. <u>Ethyl (3-(N-triphenylmethyl)-1H-tetrazol-5-yl)methyl-5-phenylmethyl-1,2,4-triazol-1-yl)acetate</u>

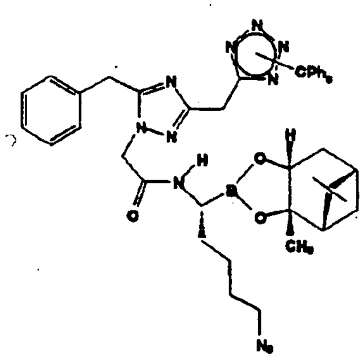
The product from Example 360, part C (1.83 g, 6.44 mmol, 1 eq), tributyltin chloride (1.75 mL, 6.44 mmol, 1 eq), sodium azide (0.42 g, 6.44 mmol, 1 eq), and xylenes (15 mL) were mixed and refluxed for 24h under an inert atmosphere. The mixture was cooled to room temperature and pyridine was then added (0.57 mL, 7.08 mmol, 1.1 eq) followed after 0.5 h by trityl chloride (1.97 g, 7.08 mmol, 1.1 eq). The following day, the reaction was worked up by adding ethyl ether and rinsing the mixture with water (3x). The ether layer was dried (MgSO4), and stripped to yield 5.66 g of an amber oil. Flash chromatography in 3:1 pentane/ethyl acetate to 100% ethyl acetate over silica gel yielded 1.33 g of an amber

oil which eventually crystallized. MS detects $(M+H)^+$ = 570 and 328 $(M+H-CPh_3)^+$.



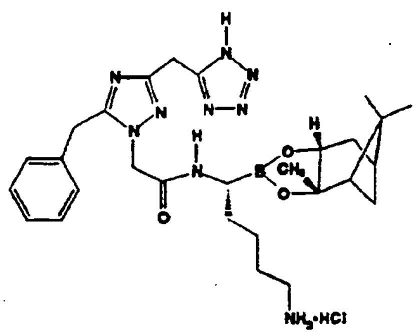
Part B. <u>(3-(N-Triphenylmethyl)-1H-tetrazol-5-yl)methyl-5-phenylmethyl-1,2,4-triazol-1-yl)acetic acid.</u>

The product from part A (200 mg, 0.35 mmol, 1 eq), 1.000 N NaOH (0.39 mL, 0.39 mmol, 1.1 eq) and THF (5 mL) were mixed and stirred at room temperature under an inert atmosphere for 24 h. The reaction was not finished and thus 0.5 eq more of 1.000 N NaOH were added and stirred overnight. Water was then added and the pH adjusted to 5 with 1N HCl. The mixture was stripped to dryness. THe residue was stirred in ethyl acetate. Some solids were filtered and the filtrate was stripped to yield 190 mg of a white glass. NMR ($CDCl_3$) ∂ 7.40-7.15 (m, 12 H); 7.15-7.00 (m, 8 H); 4.55 (s, 2); 4.40 (s, 2H); 4.10 (s, 2H).



Part C. <u>(+)-Pinanediol 5-azido-1(R)-((3-((N-triphenylmethyl)-1H-tetrazol-5-ylmethyl)-5-phenylmethyl-1,2,4-triazol-1-yl)acetamido)pentane-1-boronate.</u>

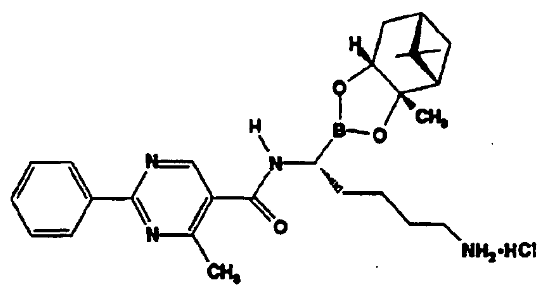
The compound in part B was converted to the corresponding azidoboronic acid pinanediol ester by the methods disclosed in example 360, parts E and F. IR (neat) 2095 cm^{-1}. NMR ($CDCl_3$) ∂ 7.45-7.20 (m, 12H); 7.17 (d, 2H, J=7 Hz); 7.12 (d, 6H, J=7 Hz); 6.34 (d, 1H, J=6 Hz); 4.60 (s, 2H); 4.42 (s, 2H); 4.27 (d, 1H, J=7 Hz); 3.13 (t, 2H, J=2 Hz); 3.06 (q, 1H, J=7 Hz); 2.40-2.10 (m, 2H); 2.01 (t, 1H, J=6 Hz); 1.95-1.70 (m, 2H); 1.60-1.40 (m, 4H); 1.37 (s, 3H); 1.35-1.20 (m, 5H); 1.16 (d, 1H, J=11 Hz); 0.82 (s, 3H). MS detects $(M+H)^+$ = 830 and $(M+H-CPh_3)^+$=588.



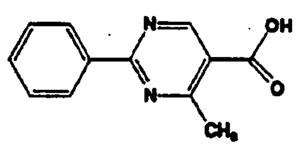
Part D. <u>R-N[1]-(3-(1H-tetrazol-5-yl)methyl-5-phenylmethyl-1,2,4-triazol-1-yl)acetyl-borolysine, (+)-pinanediol ester, hydrochloride.</u>

The product from part C (135 mg, 0.16 mmol, 1 eq), 10% Pd on carbon (25 mg), chloroform (39 µL, 0.49 mmol, 3 eq) and methanol (5 mL) were mixed and stirred under hydrogen under balloon pressure for 24 h at room temperature. The mixture was filtered through a Celite® cake rinsing the cake well with methanol afterwards. The filtrate was stripped to yield an off-white glass. This glass was triturated with ethyl ether to yield after drying 50 mg of an off-white solid. Mass calcd. for $C_{28}H_{41}BN_9O_3$: 562.3425. Found: 562.3413. NMR (DMSO-d_6) ∂ 8.75-8.50 (m, 1H); 7.40-7.10 (m, 5H); 4.87 (bs, 2H); 4.30-4.00 (m, 5H); 2.96-2.60 (m, 3H); 2.40-

2.00 (m, 2H); 1.91 (t, 1H, J=6 Hz); 1.90-1.75 (m, 1H); 1.75-1.10 (m, 14 H); 0.80 (s, 3H).



EXAMPLE 3458. R-N^1-((2-phenyl-4-methylpyrimidin-5-yl)carbonyl)borolysine, (+)-pinanediol ester, hydrochloride; X = $-CH_2NH_2$, R^{13} = -Ph, R^{14} = $-CH_3$, R^{15} = H, Y^1,Y^2 = (+)-pin.

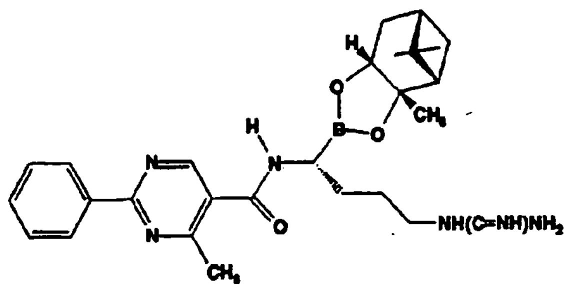


Part A. <u>2-Phenyl-4-methylpyrimidin-5-carboxylic acid.</u>

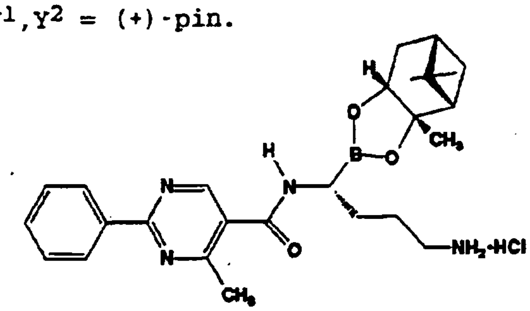
The above compound was synthesized by the procedure of P. Schenone, L. Sansebastiano, L. Mosti *J. Heterocyclic Chem.* **1990**, *27*, 302 which is generally applicable to a wide variety of pyrimidine-5-carboxylic acids.

Part B. <u>R-N^1-((2-phenyl-4-methylpyrimidin-5-yl)carbonyl)borolysine, (+)-pinanediol ester, hydrochloride.</u>

The product was obtained using the procedures described in example 360, parts E and F and example 361, part D followed by prepatory TLC in 4:1 chloroform/methanol. $(M+H)^+$=477. NMR (DMSO-d_6) ∂ 8.86 (s, 1H); 8.50-8.30 (m, 2H); 7.70-7.40 (m, 3H); 4.25 (d, 1H, J=7 Hz); 2.90-2.70 (m, 3H); 2.64 (s, 3H); 2.40-1.00 (m, 15H); 0.84 (s, 3H).



EXAMPLE 3538. R-N^1-((2-phenyl-4-methylpyrimidin-5-yl)carbonyl)boroarginine, (+)-pinanediol ester, hydrochloride; X = -NH(C=NH)NH_2, R^{13} = -Ph, R^{14} = -CH_3, R^{15} = H, Y^1,Y^2 = (+)-pin.



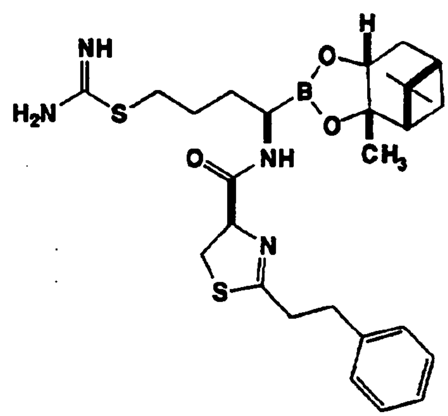
Part A. R-N^1-((2-phenyl-4-methylpyrimidin-5-yl)carbonyl)boroornithine, (+)-pinanediol ester, hydrochloride.

The above intermediate was synthesized by the procedures described for example 361 using the appropriate starting materials.

Part B. R-N^1-((2-phenyl-4-methylpyrimidin-5-yl)carbonyl)boroarginine, (+)-pinanediol ester, hydrochloride.

The product from part A (500 mg, 1 mmol, 1 eq), formamidinesulfonic acid (224 mg, 1.8 mmol, 2 eq), 4-(N,N-dimethylamino)pyridine (220 mg, 1.8 mmol, 2 eq, and ethanol (20 mL) were mixed and refluxed under an inert atmosphere for 5 hours. Some solid material was filtered and the filtrate was stripped to yield a yellow glass. The glass was taken up in chloroform/0.1 N HCl. Solids precipitated. These were filtered and dried to

yield 144 mg of product as a white powder: mp 132 °C (dec.). $(M+H)^+$=505.
Mass calcd. for $C_{27}H_{38}BN_6O_3$: 505.3086. Found: 505.3098. NMR (DMSO-d_6) δ 8.89 (s, 1H); 8.60-8.40 (m, 2H); 8.05-7.80 (m, 1H); 7.65-7.40 (m, 3H); 7.40-6.80 (m, 3H); 4.19 (d, 1H, J=7 HZ); 3.60-3.20 (m, 3H); 2.85-2.40 (m, 4H); 2.40-1.95 (m, 1H); 1.95-1.00 (m, 16 H); 0.80 (t, 3H).



Example 5926. N^1-[(4R)-2-(2-Phenyl)ethyl-Thiazoline-4-Carboxy]-R-borothioarginine-(+)-pinanediol ester

Part A. <u>(4R)-2-(2-phenyl)ethyl-thiazoline-4-carboxylic acid ethyl ester.</u>

Cysteine ethyl ester hydrochloride (950 mg, 5.10 mmol) was added to a solution of ethyl (2 -phenyl)ethylimidate (900 mg, 5.10 mmol) [prepared by the method of North, M.; Pattenden, G. *Tetrahedron* **1990**, *46*, 8267] in EtOH (20 mL) at room temperature. The reaction mixture was stirred for 16 h and concentrated under reduced pressure. The residue was partitioned between H_2O (ca. 50 mL) and EtOAc (ca. 100 mL) and the layers were separated; the aqueous phase was extracted with EtOAc (1 x 20 mL). The combined organic layers were washed with saturated aqueous NaCl (1 x 50 mL), dried (Na_2SO_4), and concentrated under reduced pressure to

give an oil which was purified by flash chromatography, elution with 3:1 hexanes - EtOAc, to afford 885 mg (66%) of the title compound as a colorless oil. ^1H NMR (300 MHz, $CDCl_3$) δ 7.23 (comp, 5H), 5.05 (dd, 1H, J = 9.5, 9.1 Hz), 4.27 (dq, 2H, J = 7.0, 1.8 Hz), 3.55 (m, 2H), 2.97 (m, 2H), 2.86 (m, 2H), 1.32 (t, 3H, J = 7.0 Hz); LRMS 264 (M + 1, base).

Part B. <u>(4R)-2-(2-phenyl)ethyl-thiazoline-4-carboxylic acid.</u>

A solution of lithium hydroxide monohydrate (96 mg, 2.28 mmol) in H_2O (2 mL) was added to a solution of (4R) - 2 - (2 - phenyl)ethyl - thiazoline - 4 - carboxylic acid ethyl ester (400 mg, 1.52 mmol) in THF (8 mL) and MeOH (5 mL). The reaction mixture was stirred at room temperature for 1 h at which time 2M aqueous HCl was added until pH = 2 and the aqueous phase was extracted with EtOAc (2 x 30 mL). The combined organic layers were washed with saturated aqueous NaCl (1 x 20 mL), dried ($MgSO_4$), and concentrated under reduced pressure to give 340 mg (95%) of the title compound as an oil. ^1H NMR (300 MHz, $CDCl_3$) δ 7.22 (comp, 5H), 6.86 (br s, 1H), 5.14 (dd, 1H, J = 9.5, 9.1 Hz), 3.64 (m, 2H), 2.96 (comp, 4H); LRMS 236 (M + 1, base).

Part C. <u>(1R)-4-Bromo-1-[(4R)-2-(2-Phenyl)ethyl-thiazoline-4-carbox]amido-1-boronic acid-(+)-pinanediol ester.</u>

A solution of (4R) - 2 - (2 - phenyl)ethyl - thiazoline - 4 - carboxylic acid (335 mg, 1.43 mmol) and 4 - methylmorpholine (0.47 mL, 4.28 mmol) in 10 mL of anhydrous THF at -20 ^oC was treated with *i* - butyl chloroformate (0.20 mL, 1.57 mmol) and stirred for 2 min after which a solution of (1R) - 4 - bromoaminobutane - 1 - boronic acid (+) - pinanediol ester (522 mg, 1.43 mmol) in 4 mL of anhydrous DMF was added. The reaction

mixture was stirred at -20 ^{o}C for 15 min, warmed to room temperature over 18 h then poured into EtOAc (ca. 100 mL) and washed with H_2O (3 x 25 mL), and saturated aqueous NaCl (1 x 25 mL), dried (Na_2SO_4) and concentrated under reduced pressure. The residue was purified by flash chromatography, elution with 3:2 hexanes - EtOAc, to give 306 mg (39%) of the title compound as an oil. LRMS 549, 547 (M + 1, base).

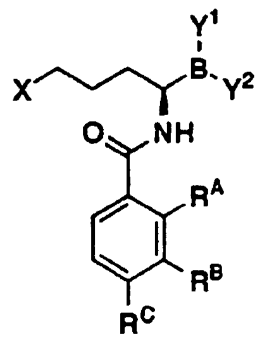
Part D. <u>N^1-[(4R)-2-(2-Phenyl)ethyl-Thiazoline-4-Carboxyl]-R-borothioarginine-(+)-pinanediol ester.</u>

A mixture of (1R) - 4 - bromo - 1 - [(4R) - 2 - (2 - phenyl)ethyl - thiazoline - 4 - carbox]amido - 1 - boronic acid (+) - pinanediol ester (295 mg, 0.54 mmol) and thiourea (82 mg, 1.08 mmol) in 10 mL of EtOH was heated at reflux for 14 h then cooled to room temperature and concentrated under reduced pressure. The residue was purified by size exclusion chromatography on Sephadex LH - 20, elution with MeOH, to give a glass which was dissolved in 3 mL of THF and treated with Et_2O (ca. 10 mL) to give a solid that was washed with Et_2O (ca. 5 mL) and dried to afford 230 mg (68%) of the title compound. LRMS 543 (M + 1, base); HRMS Calcd for $C_{27}H_{40}BN_4O_3S_2$: 543.2635. Found: 543.2643.

The compounds in the following tables were or can be synthesized by the methods discussed previously or by methods familiar to one skilled in the art.

The compounds listed in Tables 1-61 may be prepared using the above examples. It is understood that R^{14-16} and R^{A-C} in the tables correspond to independent R13 groups as described within the scope of this application.

Table 1



Ex	X	R^A	R^B	R^C	Y^1,Y^2	Phys Data
1	$NHC(NH)NH_2$	H	H	Ph	(+)-pin	A
2	$NHC(NH)NH_2$	H	Ph	H	(+)-pin	BZ
3	$NHC(NH)NH_2$	H	OPh	Ph	(+)-pin	B
4	$NHC(NH)NH_2$	H	H	4-pyridyl	(+)-pin	C
5	$NHC(NH)NH_2$	COPh	H	H	(+)-pin	
6	$NHC(NH)NH_2$	H	COPh	H	(+)-pin	
7	$NHC(NH)NH_2$	H	H	COPh	(+)-pin	
8	$NHC(NH)NH_2$	H	NHCbz	H	(+)-pin	
9	$NHC(NH)NH_2$	H	NMeCbz	H	(+)-pin	
10	$NHC(NH)NH_2$	H	H	Et	(+)-pin	
11	$NHC(NH)NH_2$	H	H	n-Pr	(+)-pin	
12	$NHC(NH)NH_2$	H	H	i-Pr	(+)-pin	
13	$NHC(NH)NH_2$	H	H	n-Bu	(+)-pin	
14	$NHC(NH)NH_2$	H	H	t-Bu	(+)-pin	
15	$NHC(NH)NH_2$	H	H	n-hexyl	(+)-pin	
16	$NHC(NH)NH_2$	H	H	cyclohexyl	(+)-pin	

17	NHC(NH)NH_2	NHCO$(CH_2)_2$Ph	H	H	(+)-pin	
18	NHC(NH)NH_2	H	H	O-n-Bu	(+)-pin	
19	NHC(NH)NH_2	H	H	NHCOcyclopropyl	(+)-pin	
20	NHC(NH)NH_2	H	H	NHCO-cyclohexyl	(+)-pin	
21	NHC(NH)NH_2	H	H	NHCO(4-C_6H_4OMe)	(+)-pin	
22	NHC(NH)NH_2	H	H	4-C_6H_4OMe	(+)-pin	
23	NHC(NH)NH_2	CO_2CH_2(2-C_6H_4Ph)	H	H	(+)-pin	
24	NHC(NH)NH_2	H	H	1-naphthyl	(+)-pin	
25	NHC(NH)NH_2	H	H	4-$C_6H_4CO_2H$	(+)-pin	
26	NHC(NH)NH_2	COPh	H	Me	(+)-pin	
27	NHC(NH)NH_2	H	NHCbz	n-Bu	(+)-pin	
28	NHC(NH)NH_2	H	NMeCbz	n-Bu	(+)-pin	
29	NHC(NH)NH_2	Me	H	Ph	(+)-pin	CB
30	NHC(NH)NH_2	Me	H	4-$C_6H_4CO_2H$	(+)-pin	
31	NHC(NH)NH_2	H	H	4-$C_6H_4CO_2Me$	(+)-pin	
32	NHC(NH)NH_2	Me	H	4-$C_6H_4CO_2Me$	(+)-pin	
33	NHC(NH)NH_2	H	OMe	Ph	(+)-pin	
34	SC(NH)NH_2	H	H	Ph	(+)-pin	D
35	SC(NH)NH_2	H	Ph	H	(+)-pin	E
36	SC(NH)NH_2	H	OPh	H	(+)-pin	F
37	SC(NH)NH_2	COPh	H	H	(+)-pin	G
38	SC(NH)NH_2	H	COPh	H	(+)-pin	H
39	SC(NH)NH_2	H	H	COPh	(+)-pin	I
40	SC(NH)NH_2	H	NHCbz	H	(+)-pin	J
41	SC(NH)NH_2	H	NMeCbz	H	(+)-pin	K
42	SC(NH)NH_2	H	H	Et	(+)-pin	L
43	SC(NH)NH_2	H	H	n-Pr	(+)-pin	M
44	SC(NH)NH_2	H	H	i-Pr	(+)-pin	N
45	SC(NH)NH_2	H	H	n-Bu	(+)-pin	O
46	SC(NH)NH_2	H	H	t-Bu	(+)-pin	P
47	SC(NH)NH_2	H	H	n-hexyl	(+)-pin	Q

48	SC(NH)NH$_2$	H	H	cyclohexyl	(+)-pin	R
49	SC(NH)NH$_2$	NHCOCH$_2$CH$_2$Ph	H	H	(+)-pin	S
50	SC(NH)NH$_2$	H	H	O-n-Bu	(+)-pin	T
51	SC(NH)NH$_2$	H	H	NHCOcyclopropyl	(+)-pin	U
52	SC(NH)NH$_2$	H	H	NHCOcyclohexyl	(+)-pin	V
53	SC(NH)NH$_2$	H	H	NHCO(4-C$_6$H$_4$OMe)	(+)-pin	W
54	SC(NH)NH$_2$	H	H	4-C$_6$H$_4$OMe	(+)-pin	X
55	SC(NH)NH$_2$	CO$_2$CH$_2$(2-C$_6$H$_4$Ph)	H	H	(+)-pin	Y
56	SC(NH)NH$_2$	H	H	1-naphthyl	(+)-pin	
57	SC(NH)NH$_2$	H	H	4-C$_6$H$_4$CO$_2$H	(+)-pin	
58	SC(NH)NH$_2$	H	NHCbz	n-Bu	(+)-pin	Z
59	SC(NH)NH$_2$	H	NMeCbz	n-Bu	(+)-pin	AA
60	SC(NH)NH$_2$	COPh	H	Me	(+)-pin	BB
61	SC(NH)NH$_2$	H	H	4-pyridyl	(+)-pin	
62	SC(NH)NH$_2$	Me	H	4-C$_6$H$_4$CO$_2$H	(+)-pin	
63	SC(NH)NH$_2$	H	H	4-C$_6$H$_4$CO$_2$Me	(+)-pin	
64	SC(NH)NH$_2$	Me	H	4-C$_6$H$_4$CO$_2$Me	(+)-pin	
65	SC(NH)NH$_2$	Me	H	Ph	(+)-pin	
66	SC(NH)NH$_2$	H	OMe	Ph	(+)-pin	
67	CH$_2$NH$_2$	H	H	Ph	(+)-pin	
68	CH$_2$NH$_2$	H	Ph	H	(+)-pin	YY
69	CH$_2$NH$_2$	H	OPh	H	(+)-pin	
70	CH$_2$NH$_2$	COPh	H	H	(+)-pin	
71	CH$_2$NH$_2$	H	COPh	H	(+)-pin	
72	CH$_2$NH$_2$	H	H	COPh	(+)-pin	
73	CH$_2$NH$_2$	H	NHCbz	H	(+)-pin	
74	CH$_2$NH$_2$	H	NMeCbz	H	(+)-pin	
75	CH$_2$NH$_2$	H	H	Et	(+)-pin	
76	CH$_2$NH$_2$	H	H	n-Pr	(+)-pin	
77	CH$_2$NH$_2$	H	H	i-Pr	(+)-pin	
78	CH$_2$NH$_2$	H	H	n-Bu	(+)-pin	

79	CH_2NH_2	H	H	t-Bu	(+)-pin
80	CH_2NH_2	H	H	n-hexyl	(+)-pin
81	CH_2NH_2	H	H	cyclohexyl	(+)-pin
82	CH_2NH_2	$NHCOCH_2CH_2Ph$	H	H	(+)-pin
83	CH_2NH_2	H	H	O-n-Bu	(+)-pin
84	CH_2NH_2	H	H	NHCOcyclopropyl	(+)-pin
85	CH_2NH_2	H	H	NHCOcyclohexyl	(+)-pin
86	CH_2NH_2	H	H	NHCO(4-C_6H_4OMe)	(+)-pin
87	CH_2NH_2	H	H	4-C_6H_4OMe	(+)-pin
88	CH_2NH_2	CO_2CH_2(2-C_6H_4Ph)	H	H	(+)-pin
89	CH_2NH_2	H	H	1-naphthyl	(+)-pin
90	CH_2NH_2	H	H	4-$C_6H_4CO_2H$	(+)-pin
91	CH_2NH_2	H	NHCbz	n-Bu	(+)-pin
92	CH_2NH_2	H	NMeCbz	n-Bu	(+)-pin
93	CH_2NH_2	COPh	H	Me	(+)-pin
94	CH_2NH_2	H	H	4-pyridyl	(+)-pin
95	CH_2NH_2	Me	H	4-$C_6H_4CO_2H$	(+)-pin
96	CH_2NH_2	H	H	4-$C_6H_4CO_2Me$	(+)-pin
97	CH_2NH_2	Me	H	4-$C_6H_4CO_2Me$	(+)-pin
98	CH_2NH_2	Me	H	Ph	(+)-pin
99	CH_2NH_2	H	OMe	Ph	(+)-pin
100	CH_2NH_2	H	OMe	Ph	OH,OH
101	NHC(NH)NH_2	H	H	Ph	OH,OH
102	NHC(NH)NH_2	H	Ph	H	OH,OH
103	NHC(NH)NH_2	H	OPh	Ph	OH,OH
104	NHC(NH)NH_2	H	H	4-pyridyl	OH,OH
105	NHC(NH)NH_2	COPh	H	H	OH,OH
106	NHC(NH)NH_2	H	COPh	H	OH,OH
107	NHC(NH)NH_2	H	H	COPh	OH,OH
108	NHC(NH)NH_2	H	NHCbz	H	OH,OH
109	NHC(NH)NH_2	H	NMeCbz	H	OH,OH

110	$NHC(NH)NH_2$	H	H	Et	OH,OH	
111	$NHC(NH)NH_2$	H	H	n-Pr	OH,OH	
112	$NHC(NH)NH_2$	H	H	i-Pr	OH,OH	
113	$NHC(NH)NH_2$	H	H	n-Bu	OH,OH	
114	$NHC(NH)NH_2$	H	H	t-Bu	OH,OH	
115	$NHC(NH)NH_2$	H	H	n-hexyl	OH,OH	
116	$NHC(NH)NH_2$	H	H	cyclohexyl	OH,OH	
117	$NHC(NH)NH_2$	$NHCO(CH_2)_2Ph$	H	H	OH,OH	
118	$NHC(NH)NH_2$	H	H	O-n-Bu	OH,OH	
119	$NHC(NH)NH_2$	H	H	NHCOcyclopropyl	OH,OH	
120	$NHC(NH)NH_2$	H	H	NHCO-cyclohexyl	OH,OH	
121	$NHC(NH)NH_2$	H	H	NHCO(4-C_6H_4OMe)	OH,OH	
122	$NHC(NH)NH_2$	H	H	4-C_6H_4OMe	OH,OH	
123	$NHC(NH)NH_2$	CO_2CH_2(2-C_6H_4Ph)	H	H	OH,OH	
124	$NHC(NH)NH_2$	H	H	1-naphthyl	OH,OH	
125	$NHC(NH)NH_2$	H	H	4-$C_6H_4CO_2H$	OH,OH	
126	$NHC(NH)NH_2$	COPh	H	Me	OH,OH	
127	$NHC(NH)NH_2$	H	NHCbz	n-Bu	OH,OH	
128	$NHC(NH)NH_2$	H	NMeCbz	n-Bu	OH,OH	
129	$NHC(NH)NH_2$	Me	H	Ph	OH,OH	CD
130	$NHC(NH)NH_2$	Me	H	4-$C_6H_4CO_2H$	OH,OH	
131	$NHC(NH)NH_2$	H	H	4-$C_6H_4CO_2Me$	OH,OH	
132	$NHC(NH)NH_2$	Me	H	4-$C_6H_4CO_2Me$	OH,OH	
133	$NHC(NH)NH_2$	H	OMe	Ph	OH,OH	
134	$SC(NH)NH_2$	H	H	Ph	OH,OH	
135	$SC(NH)NH_2$	H	Ph	H	OH,OH	
136	$SC(NH)NH_2$	H	OPh	H	OH,OH	
137	$SC(NH)NH_2$	COPh	H	H	OH,OH	
138	$SC(NH)NH_2$	H	COPh	H	OH,OH	
139	$SC(NH)NH_2$	H	H	COPh	OH,OH	
140	$SC(NH)NH_2$	H	NHCbz	H	OH,OH	

141	SC(NH)NH_2	H	NMeCbz	H	OH,OH
142	SC(NH)NH_2	H	H	Et	OH,OH
143	SC(NH)NH_2	H	H	n-Pr	OH,OH
144	SC(NH)NH_2	H	H	i-Pr	OH,OH
145	SC(NH)NH_2	H	H	n-Bu	OH,OH
146	SC(NH)NH_2	H	H	t-Bu	OH,OH
147	SC(NH)NH_2	H	H	n-hexyl	OH,OH
148	SC(NH)NH_2	H	H	cyclohexyl	OH,OH
149	SC(NH)NH_2	$NHCOCH_2CH_2Ph$	H	H	OH,OH
150	SC(NH)NH_2	H	H	O-n-Bu	OH,OH
151	SC(NH)NH_2	H	H	NHCOcyclopropyl	OH,OH
152	SC(NH)NH_2	H	H	NHCOcyclohexyl	OH,OH
153	SC(NH)NH_2	H	H	NHCO(4-C_6H_4OMe)	OH,OH
154	SC(NH)NH_2	H	H	4-C_6H_4OMe	OH,OH
155	SC(NH)NH_2	CO_2CH_2(2-C_6H_4Ph)	H	H	OH,OH
156	SC(NH)NH_2	H	H	1-naphthyl	OH,OH
157	SC(NH)NH_2	H	H	4-$C_6H_4CO_2H$	OH,OH
158	SC(NH)NH_2	H	NHCbz	n-Bu	OH,OH
159	SC(NH)NH_2	H	NMeCbz	n-Bu	OH,OH
160	SC(NH)NH_2	COPh	H	Me	OH,OH
161	SC(NH)NH_2	H	H	4-pyridyl	OH,OH
162	SC(NH)NH_2	Me	H	4-$C_6H_4CO_2H$	OH,OH
163	SC(NH)NH_2	H	H	4-$C_6H_4CO_2Me$	OH,OH
164	SC(NH)NH_2	Me	H	4-$C_6H_4CO_2Me$	OH,OH
165	SC(NH)NH_2	Me	H	Ph	OH,OH
166	SC(NH)NH_2	H	OMe	Ph	OH,OH
167	CH_2NH_2	H	H	Ph	OH,OH
168	CH_2NH_2	H	Ph	H	OH,OH
169	CH_2NH_2	H	OPh	H	OH,OH
170	CH_2NH_2	COPh	H	H	OH,OH
171	CH_2NH_2	H	COPh	H	OH,OH

172	CH_2NH_2	H	H	COPh	OH,OH
173	CH_2NH_2	H	NHCbz	H	OH,OH
174	CH_2NH_2	H	NMeCbz	H	OH,OH
175	CH_2NH_2	H	H	Et	OH,OH
176	CH_2NH_2	H	H	n-Pr	OH,OH
177	CH_2NH_2	H	H	i-Pr	OH,OH
178	CH_2NH_2	H	H	n-Bu	OH,OH
179	CH_2NH_2	H	H	t-Bu	OH,OH
180	CH_2NH_2	H	H	n-hexyl	OH,OH
181	CH_2NH_2	H	H	cyclohexyl	OH,OH
182	CH_2NH_2	$NHCOCH_2CH_2Ph$	H	H	OH,OH
183	CH_2NH_2	H	H	O-n-Bu	OH,OH
184	CH_2NH_2	H	H	NHCOcyclopropyl	OH,OH
185	CH_2NH_2	H	H	NHCOcyclohexyl	OH,OH
186	CH_2NH_2	H	H	NHCO(4-C_6H_4OMe)	OH,OH
187	CH_2NH_2	H	H	4-C_6H_4OMe	OH,OH
188	CH_2NH_2	CO_2CH_2(2-C_6H_4Ph)	H	H	OH,OH
189	CH_2NH_2	H	H	1-naphthyl	OH,OH
190	CH_2NH_2	H	H	4-$C_6H_4CO_2H$	OH,OH
191	CH_2NH_2	H	NHCbz	n-Bu	OH,OH
192	CH_2NH_2	H	NMeCbz	n-Bu	OH,OH
193	CH_2NH_2	COPh	H	Me	OH,OH
194	CH_2NH_2	H	H	4-pyridyl	OH,OH
195	CH_2NH_2	Me	H	4-$C_6H_4CO_2H$	OH,OH
196	CH_2NH_2	H	H	4-$C_6H_4CO_2Me$	OH,OH
197	CH_2NH_2	Me	H	4-$C_6H_4CO_2Me$	OH,OH
198	CH_2NH_2	Me	H	Ph	OH,OH
199	NH(C=NH)NH_2	F	H	Ph	(+)-pin SS
200	NH(C=NH)NH_2	F	H	Ph	OH, OH
201	NH(C=NH)NH_2	NH_2	H	Ph	(+)-pin
202	NH(C=NH)NH_2	NH_2	H	Ph	OH, OH

203	NH(C=NH)NH$_2$	NO$_2$	H	Ph	(+)-pin	TT
204	NH(C=NH)NH$_2$	NO$_2$	H	Ph	OH, OH	
205	NH(C=NH)NH$_2$	OH	H	Ph	(+)-pin	
206	NH(C=NH)NH$_2$	OH	H	Ph	OH, OH	
207	NH(C=NH)NH$_2$	-NHSO$_2$CF$_3$	H	Ph	(+)-pin	
208	NH(C=NH)NH$_2$	-NHSO$_2$CF$_3$	H	Ph	(+)-pin	
209	NH(C=NH)NH$_2$	-NHSO$_2$CH$_3$	H	Ph	(+)-pin	
210	NH(C=NH)NH$_2$	-NHSO$_2$CH$_3$	H	Ph	(+)-pin	
211	NH(C=NH)NH$_2$	CH$_2$CN	H	Ph	(+)-pin	
212	NH(C=NH)NH$_2$	CH$_2$CN	H	Ph	OH, OH	
213	NH(C=NH)NH$_2$	CH$_2$CH$_2$CN	H	Ph	(+)-pin	
214	NH(C=NH)NH$_2$	CH$_2$CH$_2$CN	H	Ph	OH, OH	
215	NH(C=NH)NH$_2$	OCH$_2$CN	H	Ph	(+)-pin	
216	NH(C=NH)NH$_2$	OCH$_2$CN	H	Ph	OH, OH	
217	NH(C=NH)NH$_2$	SCH$_2$CN	H	Ph	(+)-pin	
218	NH(C=NH)NH$_2$	SCH$_2$CN	H	Ph	OH, OH	
219	NH(C=NH)NH$_2$	NHCH$_2$CN	H	Ph	(+)-pin	
220	NH(C=NH)NH$_2$	NHCH$_2$CN	H	Ph	OH, OH	
221	NH(C=NH)NH$_2$	CH$_2$OH	H	Ph	(+)-pin	
222	NH(C=NH)NH$_2$	CH$_2$OH	H	Ph	OH, OH	
223	NH(C=NH)NH$_2$	CH$_3$	H	2-(t-butyl-NHSO$_2$)-Ph	(+)-pin	UU
224	NH(C=NH)NH$_2$	CH$_3$	H	2-(t-butyl-NHSO$_2$)-Ph	OH, OH	
225	NH(C=NH)NH$_2$	CH$_3$	H	2-(ethyl-NHSO$_2$)-Ph	(+)-pin	
226	NH(C=NH)NH$_2$	CH$_3$	H	2-(ethyl-NHSO$_2$)-Ph	OH, OH	
227	NH(C=NH)NH$_2$	CH$_3$	H	2-(H$_2$NSO$_2$)-Ph	(+)-pin	ZZ
228	NH(C=NH)NH$_2$	CH$_3$	H	2-(H$_2$NSO$_2$)-Ph	OH, OH	
229	NH(C=NH)NH$_2$	CH$_3$	H	2-(MeCO-NHSO$_2$)-Ph	(+)-pin	

230	NH(C=NH)NH$_2$	CH$_3$	H	2-(MeCO-NHSO$_2$)-Ph	OH, OH	
231	NH(C=NH)NH$_2$	CH$_3$	H	2-(MeOCO-NHSO$_2$)-Ph	(+)-pin	AB
232	NH(C=NH)NH$_2$	CH$_3$	H	2-(MeOCO-NHSO$_2$)-Ph	OH, OH	
233	NH(C=NH)NH$_2$	CH$_3$	H	2-(NH$_2$)-Ph	(+)-pin	
234	NH(C=NH)NH$_2$	CH$_3$	H	2-(NH$_2$)-Ph	OH, OH	
235	NH(C=NH)NH$_2$	CH$_3$	H	2-(CH$_3$SO$_2$NH)-Ph	(+)-pin	
236	NH(C=NH)NH$_2$	CH$_3$	H	2-(CH$_3$SO$_2$NH)-Ph	OH, OH	
237	NH(C=NH)NH$_2$	CH$_3$	H	2-(CF$_3$SO$_2$NH)-Ph	(+)-pin	
238	NH(C=NH)NH$_2$	CH$_3$	H	2-(CF$_3$SO$_2$NH)-Ph	OH, OH	
239	NH(C=NH)NH$_2$	CH$_3$	H	2-(CN$_4$H)-Ph	(+)-pin	
240	NH(C=NH)NH$_2$	CH$_3$	H	2-(CN$_4$H)-Ph	OH, OH	
241	NH(C=NH)NH$_2$	CH$_3$	H	2-(COOH)-Ph	(+)-pin	
242	NH(C=NH)NH$_2$	CH$_3$	H	2-(COOH)-Ph	OH, OH	
243	NH(C=NH)NH$_2$	CH$_3$	H	3-(NH$_2$)-Ph	(+)-pin	
244	NH(C=NH)NH$_2$	CH$_3$	H	3-(NH$_2$)-Ph	OH, OH	
245	NH(C=NH)NH$_2$	CH$_3$	H	3-(CH$_3$SO$_2$NH)-Ph	(+)-pin	
246	NH(C=NH)NH$_2$	CH$_3$	H	3-(CH$_3$SO$_2$NH)-Ph	OH, OH	
247	NH(C=NH)NH$_2$	CH$_3$	OH	Ph	(+)-pin	
248	NH(C=NH)NH$_2$	CH$_3$	OH	Ph	OH, OH	
249	NH(C=NH)NH$_2$	CH$_3$	NH$_2$	Ph	(+)-pin	

250	NH(C=NH)NH_2	CH_3	NH_2	Ph	OH, OH	
251	NH(C=NH)NH_2	F	H	2-(t-butyl-$NHSO_2$)-Ph	(+)-pin	
252	NH(C=NH)NH_2	F	H	2-(t-butyl-$NHSO_2$)-Ph	OH, OH	
253	NH(C=NH)NH_2	F	H	2-(ethyl-$NHSO_2$)-Ph	(+)-pin	
254	NH(C=NH)NH_2	F	H	2-(ethyl-$NHSO_2$)-Ph	OH, OH	
255	NH(C=NH)NH_2	F	H	2-(H_2NSO_2)-Ph	(+)-pin	
256	NH(C=NH)NH_2	F	H	2-(H_2NSO_2)-Ph	OH, OH	
257	NH(C=NH)NH_2	F	H	2-(MeCO-$NHSO_2$)-Ph	(+)-pin	
258	NH(C=NH)NH_2	F	H	2-(MeCO-$NHSO_2$)-Ph	OH, OH	
259	NH(C=NH)NH_2	F	H	2-(MeOCO-$NHSO_2$)-Ph	(+)-pin	
260	NH(C=NH)NH_2	F	H	2-(MeOCO-$NHSO_2$)-Ph	OH, OH	
261	NH(C=NH)NH_2	H	H	2-(t-butyl-$NHSO_2$)-Ph	(+)-pin	AC
262	NH(C=NH)NH_2	Cl	H	2-(t-butyl-$NHSO_2$)-Ph	(+)-pin	CE
263	NH(C=NH)NH_2	H	H	2-(t-butyl-$NHSO_2$)-Ph	OH, OH	AD
264	NH(C=NH)NH_2	Cl	H	2-(t-butyl-$NHSO_2$)-Ph	OH, OH	
265	NH(C=NH)NH_2	Cl	H	2-(ethyl-$NHSO_2$)-Ph	(+)-pin	
266	NH(C=NH)NH_2	Cl	H	2-(ethyl-$NHSO_2$)-Ph	OH, OH	
267	NH(C=NH)NH_2	Cl	H	2-(H_2NSO_2)-Ph	(+)-pin	

268	NH(C=NH)NH_2	Cl	H	2-(H_2NSO_2)-Ph	OH, OH	
269	NH(C=NH)NH_2	Cl	H	2-(MeCO-$NHSO_2$)-Ph	(+)-pin	
270	NH(C=NH)NH_2	Cl	H	2-(MeCO-$NHSO_2$)-Ph	OH, OH	
271	NH(C=NH)NH_2	Cl	H	2-(MeOCO-$NHSO_2$)-Ph	(+)-pin	
272	NH(C=NH)NH_2	Cl	H	2-(MeOCO-$NHSO_2$)-Ph	OH, OH	
273	NH(C=NH)NH_2	$NHSO_2CH_3$	H	2-(t-butyl-$NHSO_2$)-Ph	(+)-pin	
274	NH(C=NH)NH_2	$NHSO_2CH_3$	H	2-(t-butyl-$NHSO_2$)-Ph	OH, OH	
275	NH(C=NH)NH_2	$NHSO_2CH_3$	H	2-(ethyl-$NHSO_2$)-Ph	(+)-pin	
276	NH(C=NH)NH_2	$NHSO_2CH_3$	H	2-(ethyl-$NHSO_2$)-Ph	OH, OH	
277	NH(C=NH)NH_2	$NHSO_2CH_3$	H	2-(H_2NSO_2)-Ph	(+)-pin	
278	NH(C=NH)NH_2	$NHSO_2CH_3$	H	2-(H_2NSO_2)-Ph	OH, OH	
279	NH(C=NH)NH_2	$NHSO_2CH_3$	H	2-(MeCO-$NHSO_2$)-Ph	(+)-pin	
280	NH(C=NH)NH_2	$NHSO_2CH_3$	H	2-(MeCO-$NHSO_2$)-Ph	OH, OH	
281	NH(C=NH)NH_2	$NHSO_2CH_3$	H	2-(MeOCO-$NHSO_2$)-Ph	(+)-pin	
282	NH(C=NH)NH_2	$NHSO_2CH_3$	H	2-(MeOCO-$NHSO_2$)-Ph	OH, OH	
283	NH(C=NH)NH_2	CH_3	H	3-(t-butylOCO-NH)-Ph	(+)-pin	VV

284	NH(C=NH)NH$_2$	CH$_3$	H	3-(t-butylOCO-NH)-Ph	OH, OH	
285	NH(C=NH)NH$_2$	N(Et)$_2$	H	Ph	(+)-pin	
286	NH(C=NH)NH$_2$	CH$_3$	H	2-((ethyl)$_2$-NSO$_2$)-Ph	(+)-pin	CF
287	NH(C=NH)NH$_2$	CH$_3$	H	2-(n-BuOCO-NHSO$_2$)-Ph	(+)-pin	
288	NH(C=NH)NH$_2$	NO$_2$	H	2-(t-butyl-NHSO$_2$)-Ph	(+)-pin	CG
289	NH(C=NH)NH$_2$	NO$_2$	H	2-(t-butyl-NHSO$_2$)-Ph	OH, OH	
290	NH(C=NH)NH$_2$	NO$_2$	H	2-(ethyl-NHSO$_2$)-Ph	(+)-pin	
291	NH(C=NH)NH$_2$	NO$_2$	H	2-(ethyl-NHSO$_2$)-Ph	OH, OH	
292	NH(C=NH)NH$_2$	NO$_2$	H	2-(H$_2$NSO$_2$)-Ph	(+)-pin	
293	NH(C=NH)NH$_2$	NO$_2$	H	2-(H$_2$NSO$_2$)-Ph	OH, OH	
294	NH(C=NH)NH$_2$	NO$_2$	H	2-(MeCO-NHSO$_2$)-Ph	(+)-pin	
295	NH(C=NH)NH$_2$	NO$_2$	H	2-(MeCO-NHSO$_2$)-Ph	OH, OH	
296	NH(C=NH)NH$_2$	NO$_2$	H	2-(MeOCO-NHSO$_2$)-Ph	(+)-pin	
297	NH(C=NH)NH$_2$	NO$_2$	H	2-(MeOCO-NHSO$_2$)-Ph	OH, OH	
298	NH(C=NH)NH$_2$	H	NO$_2$	Ph	(+)-pin	AE
299	NH(C=NH)NH$_2$	H	NH$_2$	Ph	(+)-pin	AF
300	NH(C=NH)NH$_2$	H	NO$_2$	Ph	OH, OH	
301	NH(C=NH)NH$_2$	H	NH$_2$	Ph	OH, OH	
302	NH(C=NH)H	H	H	2-(t-butyl-NHSO$_2$)-Ph	(+)-pin	CH
303	NH(C=NH)NH$_2$	2-NHBOC	H	Ph	(+)-pin	CI

304	$NH(C{=}NH)NH_2$	2-NO_2	H	Ph	(+)-pin	CJ
305	-OCH_3	2-Me	H	2-(H_2NSO_2)-Ph	(+)-pin	CK
306	CH_2NH_2	CH_3	H	4-thiophen-2-yl	(+)-pin	
307	CH_2NH_2	CH_3	H	4-thiophen-3-yl	(+)-pin	
308	CH_2NH_2	CH_3	3-thiophen-2-yl	H	(+)-pin	
309	CH_2NH_2	CH_3	3-thiophen-3-yl	H	(+)-pin	
310	CH_2NH_2	CH_3	H	4-furan-2-yl	(+)-pin	
311	CH_2NH_2	CH_3	H	4-furan-3-yl	(+)-pin	
312	CH_2NH_2	CH_3	3-furan-2-yl	H	(+)-pin	
313	CH_2NH_2	CH_3	3-furan-3-yl	H	(+)-pin	
314	CH_2NH_2	CH_3	H	4-imidazol-2-yl	(+)-pin	
315	CH_2NH_2	CH_3	H	4-imidazol-4-yl	(+)-pin	
316	CH_2NH_2	CH_3	3-imidazol-2-yl	H	(+)-pin	
317	CH_2NH_2	CH_3	3-imidazol-4-yl	H	(+)-pin	
318	CH_2NH_2	CH_3	H	4-pyrazol-1-yl	(+)-pin	

319	CH_2NH_2	CH_3	H	4-pyrazol-2-yl	(+)-pin
320	CH_2NH_2	CH_3	3-pyrazol-1-yl	H	(+)-pin
321	CH_2NH_2	CH_3	3-pyrazol-2-yl	H	(+)-pin
322	CH_2NH_2	CH_3	H	4-pyrrol-1-yl	(+)-pin
323	CH_2NH_2	CH_3	H	4-pyrrol-2-yl	(+)-pin
324	CH_2NH_2	CH_3	3-pyrrol-1-yl	H	(+)-pin
325	CH_2NH_2	CH_3	3-pyrrol-2-yl	H	(+)-pin
326	CH_2NH_2	CH_3	H	4-(1,2,4-triazol-1-yl)	(+)-pin
327	CH_2NH_2	CH_3	H	4-(1,2,4-triazol-2-yl)	(+)-pin
328	CH_2NH_2	CH_3	3-(1,2,4-triazol-1-yl)	H	(+)-pin
329	CH_2NH_2	CH_3	3-(1,2,4-triazol-1-yl)	H	(+)-pin

330	CH_2NH_2	CH_3	H	4-(1,2,3-triazol-1-yl)	(+)-pin
331	CH_2NH_2	CH_3	H	4-(1,2,3-triazol-4-yl)	(+)-pin
332	CH_2NH_2	CH_3	3-(1,2,3-triazol-1-yl)	H	(+)-pin
333	CH_2NH_2	CH_3	3-(1,2,3-triazol-4-yl)	H	(+)-pin
334	CH_2NH_2	CH_3	H	4-tetrazol-1-yl	(+)-pin
335	CH_2NH_2	CH_3	H	4-tetrazol-5-yl	(+)-pin
336	CH_2NH_2	CH_3	3-tetrazol-1-yl	H	(+)-pin
337	CH_2NH_2	CH_3	3-tetrazol-5-yl	H	(+)-pin
338	CH_2NH_2	CH_3	H	4-oxazol-2-yl	(+)-pin
339	CH_2NH_2	CH_3	H	4-oxazol-4-yl	(+)-pin
340	CH_2NH_2	CH_3	H	4-oxazol-5-yl	(+)-pin

341	CH_2NH_2	CH_3	3-oxazol-2-yl	H	(+)-pin
342	CH_2NH_2	CH_3	3-oxazol-4-yl	H	(+)-pin
343	CH_2NH_2	CH_3	3-oxazol-5-yl	H	(+)-pin
344	CH_2NH_2	CH_3	H	4-thiazol-2-yl	(+)-pin
345	CH_2NH_2	CH_3	H	4-thiazol-4-yl	(+)-pin
346	CH_2NH_2	CH_3	H	4-thiazol-5-yl	(+)-pin
347	CH_2NH_2	CH_3	3-thiazol-2-yl	H	(+)-pin
348	CH_2NH_2	CH_3	3-thiazol-4-yl	H	(+)-pin
349	CH_2NH_2	CH_3	3-thiazol-5-yl	H	(+)-pin
350	CH_2NH_2	CH_3	H	4-pyridin-2-yl	(+)-pin
351	CH_2NH_2	CH_3	H	4-pyridin-3-yl	(+)-pin
352	CH_2NH_2	CH_3	3-pyridin-2-yl	H	(+)-pin
353	CH_2NH_2	CH_3	3-pyridin-3-yl	H	(+)-pin

354	CH_2NH_2	CH_3	H	4-pyrimidin-2-yl	(+)-pin
355	CH_2NH_2	CH_3	H	4-pyrimidin-4-yl	(+)-pin
356	CH_2NH_2	CH_3	H	4-pyrimidin-5-yl	(+)-pin
357	CH_2NH_2	CH_3	3-pyrimidin-2-yl	H	(+)-pin
358	CH_2NH_2	CH_3	3-pyrimidin-4-yl	H	(+)-pin
359	CH_2NH_2	CH_3	3-pyrimidin-5-yl	H	(+)-pin

(+)-pin indicates (+)-pinanediol

A: MS $(M+H)^+ = 489$;

B: MS (DCI - NH_3), 505 $(M + H)^+$.

C: MS $(M+H)^+ = 490$.

D: MS $(M+H)^+ = 506$;

E: mp 145-150 °C; MS (DCI - NH_3), Calc: 506, Found: 506.

F: MS (DCI - NH_3), 522 $(M + H)^+$.

G: HRMS (DCI - NH_3), Calc: 534.2597, Found: 534.2609.

H: HRMS (DCI - NH_3), Calc: 534.2597, Found: 534.2605.

I: HRMS (DCI - NH_3), Calc: 534.2597, Found: 534.2609.

J: $[\alpha]_D = -14.85°$ (c = 0.606, MeOH); MS (CI - NH_3), *m/e* (%) 537.2 (10.2, $M + H - H_2NCN)^+$), 429.0 (42.8), 277.0 (100); Anal. Calcd for $C_{30}H_{40}BBrN_4O_5S$: C, 54.64; H, 6.11; N, 8.50; B, 1.64. Found: C, 54.52; H, 6.16; N, 8.45; B, 1.60.

K: $[\alpha]_D = -15.07°$ (c = 0.604, MeOH); MS (CI - NH_3), *m/e* (%) 593.2 (1.2, $(M + H)^+$), 568.3 (22, $(M + NH_4 - H_2NCN)^+$), 551.3 (100, $(M + H - H_2NCN)^+$); Anal. Calcd for $C_{31}H_{42}BBrN_4O_5S$: C, 55.29; H, 6.29; N, 8.32; B, 1.61. Found: C, 55.15; H, 6.21; N, 8.22; B, 1.47.

L: $[a]_D$ = -14.12° (c = 0.602, MeOH); MS (DCI - NH_3), *m/e* (%) 458 (100, $(M + H)^+$); Anal. Calcd for $C_{24}H_{37}BBrN_3O_3S$: C, 53.54; H, 6.93; N, 7.81; B, 2.01. Found: C, 53.75; H, 6.98; N, 7.74; B, 1.97.

M: $[a]_D$ = -14.21° (c = 0.556, MeOH); MS (CI - NH_3), *m/e* (%) 472.2 (13.5, $(M + H)^+$), 430.2 (100, $(M + H - H_2NCN)^+$), 278.0 (61.9); Anal. Calcd for $C_{25}H_{39}BBrN_3O_3S$: C, 54.36; H, 7.12; N, 7.61; B, 1.96. Found: C, 54.50; H, 7.18; N, 7.83; B, 1.73.

N: $[a]_D$ = -13.79° (c = 0.602, MeOH); MS (DCI - NH_3), *m/e* (%) 472 (100, $(M + H)^+$), 430 (37, $(M + H - H_2NCN)^+$); Anal. Calcd for $C_{25}H_{39}BBrN_3O_3S$: C, 54.36; H, 7.12; N, 7.61; B, 1.96. Found: C, 54.64; H, 7.17; N, 7.50; B, 1.74.

O: $[a]_D$ = -13.19° (c = 0.364, MeOH); MS (CI - NH_3), *m/e* (%) 486.2 (3.3, $(M + H)^+$), 444.2 (87.1, $(M + H - H_2NCN)^+$), 292.0 (100); Anal. Calcd for $C_{26}H_{41}BBrN_3O_3S$: C, 55.13; H, 7.30; N, 7.42; B, 1.91. Found: C, 54.99; H, 7.22; N, 7.29; B, 2.07.

P: $[a]_D$ = -12.71° (c = 0.598, MeOH); MS (DCI - NH_3), *m/e* (%) 486 (100, $(M + H)^+$), 444 (16, $(M + H - H_2NCN)^+$); Anal. Calcd for $C_{26}H_{41}BBrN_3O_3S$: C, 55.13; H, 7.30; N, 7.42; B, 1.91. Found: C, 55.09; H, 7.45; N, 7.40; B, 1.67.

Q: MS (DCI - NH_3), *m/e* (%) 514 (100, $(M + H)^+$), 472 (16, $(M + H - H_2NCN)^+$); Anal. Calcd for $C_{28}H_{45}BBrN_3O_3S$: C, 56.57; H, 7.63; N, 7.07; B, 1.82. Found: C, 56.19; H, 7.53; N, 6.97; B, 1.99.

R: $[a]_D$ = -11.70° (c = 0.530, MeOH); MS (DCI - NH_3), *m/e* (%) 512 (100, $(M + H)^+$), 470 (40, $(M + H - H_2NCN)^+$); Anal. Calcd for $C_{28}H_{43}BBrN_3O_3S$: C, 56.77; H, 7.32; N, 7.09; B, 1.82. Found: C, 56.49; H, 7.38; N, 6.96; B, 1.75.

S: HRMS (DCI - NH_3), Calc: 577.3019, Found: 577.3025.

T: $[a]_D$ = -8.31° (c = 0.614, MeOH); MS (DCI - NH_3), *m/e* (%) 502 (100, $(M + H)^+$), 460 (28, $(M + H - H_2NCN)^+$);

Anal. Calcd for $C_{26}H_{41}BBrN_3O_4S$: C, 53.62; H, 7.10; N, 7.21; B, 1.86. Found: C, 53.61; H, 7.09; N, 7.20; B, 1.78.

U: HRMS (DCI - NH_3), Calc: 513.2707, Found: 513.2702.

V: HRMS (DCI - NH_3), Calc: 555.3165, Found: 555.3176.

W: HRMS (DCI - NH_3), Calc: 579.2812, Found: 579.2801.

X: HRMS (DCI - NH_3), Calc: 450.2962, Found: 450.2958.

Y: HRMS (DCI - NH_3), Calc: 640.3016, Found: 640.3022.

Z: $[a]_D = -8.80°$ (c = 0.602, MeOH); MS (CI - NH_3), *m/e* (%) 593.2 (1.3, $(M + H - H_2NCN)^+$), 485.2 (42.7), 333.0 (100); Anal. Calcd for $C_{34}H_{48}BBrN_4O_5S$: C, 57.07; H, 6.76; N, 7.83; B, 1.51. Found: C, 57.17; H, 6.84; N, 7.76; B, 1.41.

AA: MS (CI - NH_3), *m/e* (%) 649.4 (1.9, $(M + H)^+$), 624.4 (31, $(M + NH_4 - H_2NCN)^+$), 607.2 (100, $(M + H - H_2NCN)^+$), 455.0 (39), 444.0 (29.8); Anal. Calcd for $C_{35}H_{50}BBrN_4O_5S$: C, 57.62; H, 6.91; N, 7.68; B, 1.48. Found: C, 57.37; H, 6.86; N, 7.64; B, 1.40.

BB: HRMS (DCI - NH_3), Calc: 520.2805, Found: 520.2796.

SS. MS (DCI - NH_3), Calc: 507, Found: 507.

TT. MS (DCI - NH_3), Calc: 534, Found: 534.

UU. MS (DCI - NH_3), Calc: 638, Found: 638.

VV. MS (DCI - NH_3), Calc: 618, Found: 618.

XX. MS (DCI - NH_3), Calc: 489, Found: 489.

YY. MS (DCI - NH_3), Calc: 461, Found: 461.

ZZ. MS (DCI - NH_3), Calc: 582, Found: 582.

AB. MS (DCI - NH_3), Calc: 641, Found: 641.

AC. MS (DCI - NH_3), Calc: 625, Found: 625.

AD. MS (DCI - NH_3), Calc: 490, Found: 490.

AE. MS (DCI - NH_3), Calc: 534, Found: 534.

AF. MS (DCI - NH_3), Calc: 504, Found: 504.

CB. MS $(M+H)^+$, Calc: 503.32, Found: 503.32.

CD. MS $(M+H)^+$, Calc: , Found: .(WITYAK)

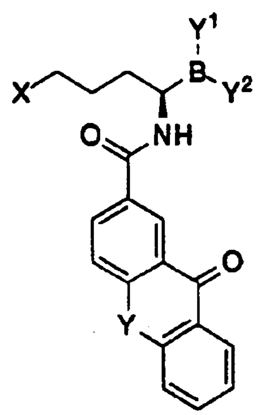
CE. MS $(M+H)^+$, Calc: 658, Found: 658.

CF. MS $(M+H)^+$, Calc: 638, Found: 638.

CG. MS $(M+H)^+$, Calc: 669, Found: 669.

CH. MS $(M+H)^+$, Calc: 609, Found: 609.
CI. MS $(M+H)^+$, Calc: 604, Found: 604.
CJ. MS $(M+H)^+$, Calc: 641, Found: 641.
CK. MS $(M+H)^+$, Calc: 555, Found: 555.

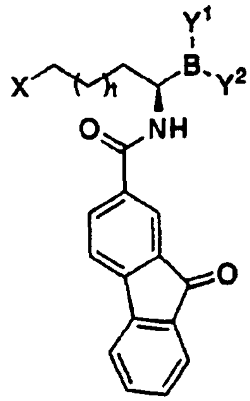
Table 2



Ex	X	Y	Y^1,Y^2	Phys Data
365	CH_2NH_2	CO	(+)-pin	
366	CH_2NH_2	SO_2	(+)-pin	
367	NHC(NH)NH_2	CO	(+)-pin	
368	NHC(NH)NH_2	SO_2	(+)-pin	
369	SC(NH)NH_2	CO	(+)-pin	CC
370	SC(NH)NH_2	SO_2	(+)-pin	DD
371	CH_2NH_2	CO	OH,OH	
372	CH_2NH_2	SO_2	OH,OH	
373	NHC(NH)NH_2	CO	OH,OH	
374	NHC(NH)NH_2	SO_2	OH,OH	
375	SC(NH)NH_2	CO	OH,OH	
376	SC(NH)NH_2	SO_2	OH,OH	

CC: HRMS (DCI - NH_3), Calc: 560.2390, Found: 560.2407.
DD: HRMS (DCI - NH_3), Calc: 596.2060, Found: 596.2055.

Table 3

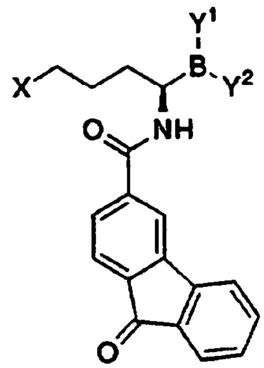


Ex	X	t	Y^1,Y^2	Phys Data
382	NH_2	2	(+)-pin	
383	$SC(NH)NH_2$	2	(+)-pin	EE
384	$SC(NH)NH_2$	1	(+)-pin	FF
385	$NHC(NH)NH_2$	2	(+)-pin	
386	$NHC(NH)NH_2$	1	(+)-pin	
387	NH_2	2	OH,OH	
388	$SC(NH)NH_2$	2	OH,OH	
389	$SC(NH)NH_2$	1	OH,OH	
390	$NHC(NH)NH_2$	2	OH,OH	
391	$NHC(NH)NH_2$	1	OH,OH	

EE: HRMS (DCI - NH_3), Calc: 546.2597, Found: 546.2604.

FF: HRMS (DCI - NH_3), Calc: 534.2597, Found: 534.2609.

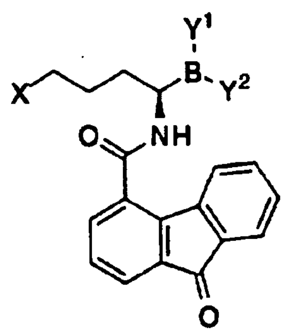
Table 4



Ex	X	Y^1,Y^2	Phys Data
397	CH_2NH_2	(+)-pin	
398	$NHC(NH)NH_2$	(+)-pin	
399	$SC(NH)NH_2$	(+)-pin	GG
400	CH_2NH_2	OH,OH	
401	$NHC(NH)NH_2$	OH,OH	
402	$SC(NH)NH_2$	OH,OH	

GG: HRMS (DCI - NH_3), Calc: 532.2441, Found: 532.2445.

Table 5

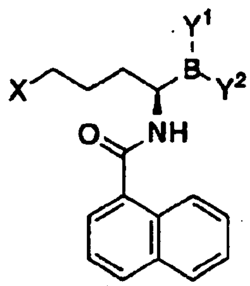


Ex	X	Y^1,Y^2	Phys Data
403	CH_2NH_2	(+)-pin	
404	$NHC(NH)NH_2$	(+)-pin	

405	SC(NH)NH2	(+)-pin	HH
406	CH2NH2	OH,OH	
407	NHC(NH)NH2	OH,OH	
408	SC(NH)NH2	OH,OH	

HH: HRMS (DCI - NH_3), Calc: 532.2441, Found: 532.2452.

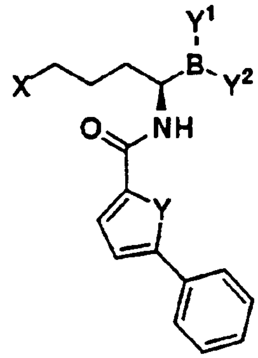
Table 6



Ex	X	Y^1,Y^2	Phys Data
436	NHC(NH)NH2	(+)-pin	
437	SC(NH)NH2	(+)-pin	II
438	CH2NH2	(+)-pin	
439	NHC(NH)NH2	OH,OH	
440	SC(NH)NH2	OH,OH	
441	CH2NH2	OH,OH	

II: HRMS (DCI - NH_3), Calc: 480.2493, Found: 480.2492.

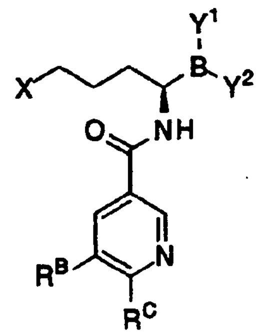
Table 7



Ex	X	Y	Y^1,Y^2	Phys Data
447	$NHC(NH)NH_2$	O	(+)-pin	WW
448	$SC(NH)NH_2$	O	(+)-pin	JJ
449	CH_2NH_2	O	(+)-pin	
450	$NHC(NH)NH_2$	S	(+)-pin	
451	$SC(NH)NH_2$	S	(+)-pin	
452	CH_2NH_2	S	(+)-pin	
453	$NHC(NH)NH_2$	O	OH,OH	
454	$SC(NH)NH_2$	O	OH,OH	
455	CH_2NH_2	O	OH,OH	
456	$NHC(NH)NH_2$	S	OH,OH	
457	$SC(NH)NH_2$	S	OH,OH	
458	CH_2NH_2	S	OH,OH	

JJ: HRMS (DCI - NH_3), Calc: 496.2441, Found: 496.2449.
WW. MS (DCI - NH_3), Calc: 345, Found: 345.

Table 8



Ex	X	R^B	R^C	Y^1,Y^2	Phys Data
464	NHC(NH)NH_2	H	Ph	(+)-pin	
465	NHC(NH)NH_2	OBn	H	(+)-pin	
466	SC(NH)NH_2	H	Ph	(+)-pin	KK
467	SC(NH)NH_2	OBn	H	(+)-pin	LL
468	CH_2NH_2	H	Ph	(+)-pin	CL
469	CH_2NH_2	OBn	H	(+)-pin	
470	NHC(NH)NH_2	H	Ph	OH,OH	
471	NHC(NH)NH_2	OBn	H	OH,OH	
472	SC(NH)NH_2	H	Ph	OH,OH	
473	SC(NH)NH_2	OBn	H	OH,OH	
474	CH_2NH_2	H	Ph	OH,OH	CM
475	CH_2NH_2	OBn	H	OH,OH	

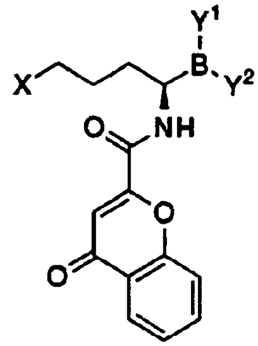
KK: HRMS (DCI - NH_3), Calc: 507.2601, Found: 507.2592.

LL: HRMS (DCI - NH_3), Calc: 537.2667, Found: 537.2685.

CL: Anal. Calc'd. for $C_{27}H_{36}BN_3O_3 \cdot (HCl)_{1.7} \cdot (H_2O)_{2.2}$: C, 57.60; H, 7.54; Cl, 10.70; N, 7.46. Found: C, 57.40; H, 7.23; Cl, 10.78; N, 7.53. MS $(M+H)^+$: calc. 462, Found 462.

CM: MS$(M+H)^+$: Calc: 328, Found: 328.

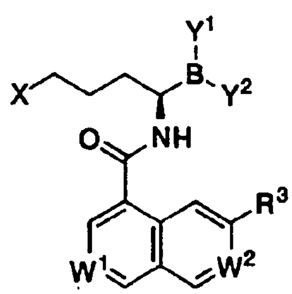
Table 9



Ex	X	Y^1,Y^2	Phys Data
476	$NHC(NH)NH_2$	(+)-pin	
477	$SC(NH)NH_2$	(+)-pin	MM
478	CH_2NH_2	(+)-pin	
479	$NHC(NH)NH_2$	OH,OH	
480	$SC(NH)NH_2$	OH,OH	
481	CH_2NH_2	OH,OH	

MM: HRMS (DCI - NH_3), Calc: 498.2233, Found: 498.2231.

Table 10



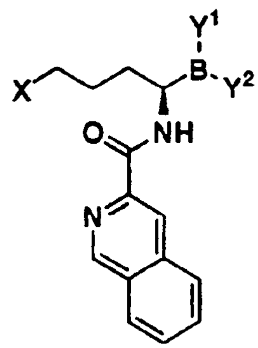
Ex	X	W^1	W^2	R^3	Y^1,Y^2	Phys Data
482	$NHC(NH)NH_2$	N	CH	H	(+)-pin	
483	$SC(NH)NH_2$	N	CH	H	(+)-pin	NN
484	CH_2NH_2	N	CH	H	(+)-pin	

485	NHC(NH)NH2	CH	N	Ph	(+)-pin	
486	SC(NH)NH2	CH	N	Ph	(+)-pin	OO
487	CH2NH2	CH	N	Ph	(+)-pin	
488	NHC(NH)NH2	N	CH	H	OH,OH	
489	SC(NH)NH2	N	CH	H	OH,OH	
490	CH2NH2	N	CH	H	OH,OH	
491	NHC(NH)NH2	CH	N	Ph	OH,OH	
492	SC(NH)NH2	CH	N	Ph	OH,OH	
493	CH2NH2	CH	N	Ph	OH,OH	

NN: HRMS (DCI - NH_3), Calc: 481.2445, Found: 481.2442.

OO: HRMS (DCI - NH_3), Calc: 557.2758, Found: 557.2754.

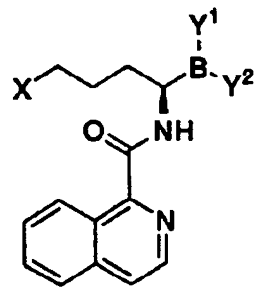
Table 11



Ex	X	Y1,Y2	Phys Data
499	NHC(NH)NH2	(+)-pin	
500	SC(NH)NH2	(+)-pin	PP
501	CH2NH2	(+)-pin	
502	NHC(NH)NH2	OH,OH	
503	SC(NH)NH2	OH,OH	
504	CH2NH2	OH,OH	

PP: HRMS (DCI - NH_3), Calc: 5481.2445, Found: 481.2440.

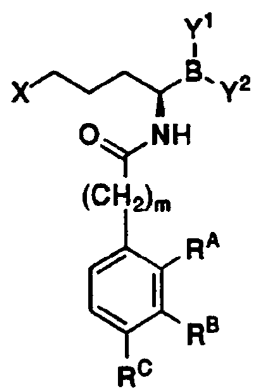
Table 12



Ex	X	R^3	Y^1, Y^2	Phys Data
510	SC(NH)NH_2	H	(+)-pin	QQ

QQ: HRNS (NH_3 -CI/DEP), Calc: 503.3193, Found: 503.3199.

Table 13

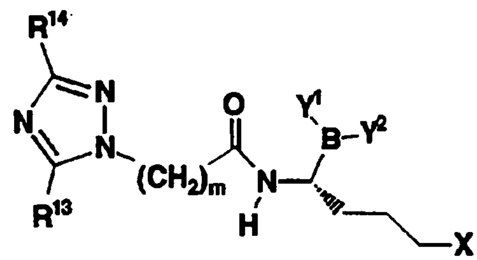


Ex	m, X	R^A	R^B	R^C	Y^1,Y^2	Phys Data
516	2, SC(NH)NH_2	H	NHCO-(CH_2)$_2$Ph	H	(+)-pin	RR
517	2, SC(NH)NH_2	H	Ph	H	(+)-pin	
518	2, SC(NH)NH_2	H	OPh	Ph	(+)-pin	
519	1, SC(NH)NH_2	H	H	4-pyridyl	(+)-pin	
520	1, NHC(NH)NH2	COPh	H	H	(+)-pin	

521	3, NHC(NH)NH2	H	COPh	H	(+)-pin
522	3, NHC(NH)NH2	H	H	COPh	(+)-pin

RR: HRMS (DCI-NH_3), Calc: 605.333, Found: 605.3325.

Table 14



Ex	X	m	R^{13}	R^{14}	Y^1Y^2	Phys. Data
528	CH_2NH_2	1	Ph	H	(+)-pin	
529	CH_2NH_2	1	Ph	Methyl	(+)-pin	
530	CH_2NH_2	1	Ph	Ethyl	(+)-pin	
531	CH_2NH_2	1	Ph	n-Propyl	(+)-pin	
532	CH_2NH_2	1	Ph	n-Butyl	(+)-pin	
533	CH_2NH_2	1	Ph	CH_2SCH_3	(+)-pin	
534	CH_2NH_2	1	Ph	$CH_2(SO)CH_3$	(+)-pin	
535	CH_2NH_2	1	Ph	$CH_2(SO_2)CH_3$	(+)-pin	
536	CH_2NH_2	1	Ph	$CH_2CH_2SCH_3$	(+)-pin	
537	CH_2NH_2	1	Ph	$CH_2CH_2(SO)CH_3$	(+)-pin	
538	CH_2NH_2	1	Ph	$CH_2CH_2(SO)_2CH_3$	(+)-pin	
539	CH_2NH_2	1	Ph	CH_2CN	(+)-pin	
540	CH_2NH_2	1	Ph	CH_2CH_2CN	(+)-pin	
541	CH_2NH_2	1	Ph	$CH_2CH_2CH_2CN$	(+)-pin	
542	CH_2NH_2	1	Ph	CF_3	(+)-pin	
543	CH_2NH_2	1	Ph	CF_2CF_3	(+)-pin	
544	CH_2NH_2	1	Ph	$CF_2CF_2CF_3$	(+)-pin	
545	CH_2NH_2	1	Ph	$CF_2CF_2CF_2CF_3$	(+)-pin	
546	CH_2NH_2	1	Ph	F_5-Ph	(+)-pin	
547	CH_2NH_2	1	Ph	CH_2CO_2H	(+)-pin	
548	CH_2NH_2	1	Ph	$(CH_2)_2CO_2H$	(+)-pin	
549	CH_2NH_2	1	Ph	$(CH_2)_3CO_2H$	(+)-pin	
550	CH_2NH_2	1	Ph	CH_2CN_4H	(+)-pin	
551	CH_2NH_2	1	Ph	$(CH_2)_2CN_4H$	(+)-pin	
552	CH_2NH_2	1	Ph	$(CH_2)_3CN_4H$	(+)-pin	
553	CH_2NH_2	1	Ph	CH_2NO_2	(+)-pin	
554	CH_2NH_2	1	Ph	$(CH_2)_2NO_2$	(+)-pin	
555	CH_2NH_2	1	Ph	$(CH_2)_3NO_2$	(+)-pin	

556	CH_2NH_2	1	Ph	CH_2OH	(+)-pin	
557	CH_2NH_2	1	Ph	$(CH_2)_2OH$	(+)-pin	
558	CH_2NH_2	1	Ph	$(CH_2)_3OH$	(+)-pin	
559	CH_2NH_2	1	Ph	CH_2CO_2Me	(+)-pin	
560	CH_2NH_2	1	Ph	$(CH_2)_2CO_2Me$	(+)-pin	
561	CH_2NH_2	1	Ph	$(CH_2)_3CO_2Me$	(+)-pin	
562	CH_2NH_2	1	Ph	Ph	(+)-pin	
563	CH_2NH_2	1	Ph	$PhCH_2$	(+)-pin	AG
564	CH_2NH_2	1	Ph	$Ph(CH_2)_2$	(+)-pin	
565	CH_2NH_2	1	Ph	3-NO_2-Ph	(+)-pin	
566	CH_2NH_2	1	Ph	4-NO_2-Ph	(+)-pin	
567	CH_2NH_2	1	Ph	3-CO_2H-Ph	(+)-pin	
568	CH_2NH_2	1	Ph	4-CO_2H-Ph	(+)-pin	
569	CH_2NH_2	1	Ph	3-CN_4H-Ph	(+)-pin	
570	CH_2NH_2	1	Ph	4-CN_4H-Ph	(+)-pin	
571	CH_2NH_2	1	Ph	3-($HOCH_2$)-Ph	(+)-pin	
572	CH_2NH_2	1	Ph	4-($HOCH_2$)-Ph	(+)-pin	
573	$NH(C{=}NH)NH_2$	1	Ph	H	(+)-pin	
574	$NH(C{=}NH)NH_2$	1	Ph	Methyl	(+)-pin	
575	$NH(C{=}NH)NH_2$	1	Ph	Ethyl	(+)-pin	
576	$NH(C{=}NH)NH_2$	1	Ph	n-Propyl	(+)-pin	
577	$NH(C{=}NH)NH_2$	1	Ph	n-Butyl	(+)-pin	
578	$NH(C{=}NH)NH_2$	1	Ph	CH_2SCH_3	(+)-pin	
579	$NH(C{=}NH)NH_2$	1	Ph	$CH_2(SO)CH_3$	(+)-pin	
580	$NH(C{=}NH)NH_2$	1	Ph	$CH_2(SO_2)CH_3$	(+)-pin	
581	$NH(C{=}NH)NH_2$	1	Ph	$CH_2CH_2SCH_3$	(+)-pin	
582	$NH(C{=}NH)NH_2$	1	Ph	$CH_2CH_2(SO)CH_3$	(+)-pin	
583	$NH(C{=}NH)NH_2$	1	Ph	$CH_2CH_2(SO)_2CH_3$	(+)-pin	
584	$NH(C{=}NH)NH_2$	1	Ph	CH_2CN	(+)-pin	
585	$NH(C{=}NH)NH_2$	1	Ph	CH_2CH_2CN	(+)-pin	
586	$NH(C{=}NH)NH_2$	1	Ph	$CH_2CH_2CH_2CN$	(+)-pin	
587	$NH(C{=}NH)NH_2$	1	Ph	CF_3	(+)-pin	
588	$NH(C{=}NH)NH_2$	1	Ph	CF_2CF_3	(+)-pin	
589	$NH(C{=}NH)NH_2$	1	Ph	$CF_2CF_2CF_3$	(+)-pin	
590	$NH(C{=}NH)NH_2$	1	Ph	$CF_2CF_2CF_2CF_3$	(+)-pin	
591	$NH(C{=}NH)NH_2$	1	Ph	F_5-Ph	(+)-pin	
592	$NH(C{=}NH)NH_2$	1	Ph	CH_2CO_2H	(+)-pin	
593	$NH(C{=}NH)NH_2$	1	Ph	$(CH_2)_2CO_2H$	(+)-pin	
594	$NH(C{=}NH)NH_2$	1	Ph	$(CH_2)_3CO_2H$	(+)-pin	
595	$NH(C{=}NH)NH_2$	1	Ph	CH_2CN_4H	(+)-pin	

596	NH(C=NH)NH_2	1	Ph	$(CH_2)_2CN_4H$	(+)-pin
597	NH(C=NH)NH_2	1	Ph	$(CH_2)_3CN_4H$	(+)-pin
598	NH(C=NH)NH_2	1	Ph	CH_2NO_2	(+)-pin
599	NH(C=NH)NH_2	1	Ph	$(CH_2)_2NO_2$	(+)-pin
600	NH(C=NH)NH_2	1	Ph	$(CH_2)_3NO_2$	(+)-pin
601	NH(C=NH)NH_2	1	Ph	CH_2OH	(+)-pin
602	NH(C=NH)NH_2	1	Ph	$(CH_2)_2OH$	(+)-pin
603	NH(C=NH)NH_2	1	Ph	$(CH_2)_3OH$	(+)-pin
604	NH(C=NH)NH_2	1	Ph	CH_2CO_2Me	(+)-pin
605	NH(C=NH)NH_2	1	Ph	$(CH_2)_2CO_2Me$	(+)-pin
606	NH(C=NH)NH_2	1	Ph	$(CH_2)_3CO_2Me$	(+)-pin
607	NH(C=NH)NH_2	1	Ph	Ph	(+)-pin
609	NH(C=NH)NH_2	1	Ph	3-NO_2-Ph	(+)-pin
610	NH(C=NH)NH_2	1	Ph	4-NO_2-Ph	(+)-pin
611	NH(C=NH)NH_2	1	Ph	3-CO_2H-Ph	(+)-pin
612	NH(C=NH)NH_2	1	Ph	4-CO_2H-Ph	(+)-pin
613	NH(C=NH)NH_2	1	Ph	3-CN_4H-Ph	(+)-pin
614	NH(C=NH)NH_2	1	Ph	4-CN_4H-Ph	(+)-pin
615	NH(C=NH)NH_2	1	Ph	3-($HOCH_2$)-Ph	(+)-pin
616	NH(C=NH)NH_2	1	Ph	4-($HOCH_2$)-Ph	(+)-pin
617	CH_2NH_2	1	Ph	H	OH, OH
618	CH_2NH_2	1	Ph	Methyl	OH, OH
619	CH_2NH_2	1	Ph	Ethyl	OH, OH
620	CH_2NH_2	1	Ph	n-Propyl	OH, OH
621	CH_2NH_2	1	Ph	n-Butyl	OH, OH
622	CH_2NH_2	1	Ph	CH_2SCH_3	OH, OH
623	CH_2NH_2	1	Ph	$CH_2(SO)CH_3$	OH, OH
624	CH_2NH_2	1	Ph	$CH_2(SO_2)CH_3$	OH, OH
625	CH_2NH_2	1	Ph	$CH_2CH_2SCH_3$	OH, OH
626	CH_2NH_2	1	Ph	$CH_2CH_2(SO)CH_3$	OH, OH
627	CH_2NH_2	1	Ph	$CH_2CH_2(SO)_2CH_3$	OH, OH
628	CH_2NH_2	1	Ph	CH_2CN	OH, OH
629	CH_2NH_2	1	Ph	CH_2CH_2CN	OH, OH
630	CH_2NH_2	1	Ph	$CH_2CH_2CH_2CN$	OH, OH
631	CH_2NH_2	1	Ph	CF_3	OH, OH
632	CH_2NH_2	1	Ph	CF_2CF_3	OH, OH
633	CH_2NH_2	1	Ph	$CF_2CF_2CF_3$	OH, OH
634	CH_2NH_2	1	Ph	$CF_2CF_2CF_2CF_3$	OH, OH
635	CH_2NH_2	1	Ph	F_5-Ph	OH, OH
636	CH_2NH_2	1	Ph	CH_2CO_2H	OH, OH

637	CH_2NH_2	1	Ph	$(CH_2)_2CO_2H$	OH, OH	
638	CH_2NH_2	1	Ph	$(CH_2)_3CO_2H$	OH, OH	
639	CH_2NH_2	1	Ph	CH_2CN_4H	OH, OH	
640	CH_2NH_2	1	Ph	$(CH_2)_2CN_4H$	OH, OH	
641	CH_2NH_2	1	Ph	$(CH_2)_3CN_4H$	OH, OH	
642	CH_2NH_2	1	Ph	CH_2NO_2	OH, OH	
643	CH_2NH_2	1	Ph	$(CH_2)_2NO_2$	OH, OH	
644	CH_2NH_2	1	Ph	$(CH_2)_3NO_2$	OH, OH	
645	CH_2NH_2	1	Ph	CH_2OH	OH, OH	
646	CH_2NH_2	1	Ph	$(CH_2)_2OH$	OH, OH	
647	CH_2NH_2	1	Ph	$(CH_2)_3OH$	OH, OH	
648	CH_2NH_2	1	Ph	CH_2CO_2Me	OH, OH	
649	CH_2NH_2	1	Ph	$(CH_2)_2CO_2Me$	OH, OH	
650	CH_2NH_2	1	Ph	$(CH_2)_3CO_2Me$	OH, OH	
651	CH_2NH_2	1	Ph	Ph	OH, OH	
652	CH_2NH_2	1	Ph	$PhCH_2$	OH, OH	AH
653	CH_2NH_2	1	Ph	$Ph(CH_2)_2$	OH, OH	
654	CH_2NH_2	1	Ph	3-NO_2-Ph	OH, OH	
655	CH_2NH_2	1	Ph	4-NO_2-Ph	OH, OH	
656	CH_2NH_2	1	Ph	3-CO_2H-Ph	OH, OH	
657	CH_2NH_2	1	Ph	4-CO_2H-Ph	OH, OH	
658	CH_2NH_2	1	Ph	3-CN_4H-Ph	OH, OH	
659	CH_2NH_2	1	Ph	4-CN_4H-Ph	OH, OH	
660	CH_2NH_2	1	Ph	3-$(HOCH_2)$-Ph	OH, OH	
661	CH_2NH_2	1	Ph	4-$(HOCH_2)$-Ph	OH, OH	
662	$NH(C{=}NH)NH_2$	1	Ph	H	OH, OH	
663	$NH(C{=}NH)NH_2$	1	Ph	Methyl	OH, OH	
664	$NH(C{=}NH)NH_2$	1	Ph	Ethyl	OH, OH	
665	$NH(C{=}NH)NH_2$	1	Ph	n-Propyl	OH, OH	
666	$NH(C{=}NH)NH_2$	1	Ph	n-Butyl	OH, OH	
667	$NH(C{=}NH)NH_2$	1	Ph	CH_2SCH_3	OH, OH	
668	$NH(C{=}NH)NH_2$	1	Ph	$CH_2(SO)CH_3$	OH, OH	
669	$NH(C{=}NH)NH_2$	1	Ph	$CH_2(SO_2)CH_3$	OH, OH	
670	$NH(C{=}NH)NH_2$	1	Ph	$CH_2CH_2SCH_3$	OH, OH	
671	$NH(C{=}NH)NH_2$	1	Ph	$CH_2CH_2(SO)CH_3$	OH, OH	
672	$NH(C{=}NH)NH_2$	1	Ph	$CH_2CH_2(SO)_2CH_3$	OH, OH	
673	$NH(C{=}NH)NH_2$	1	Ph	CH_2CN	OH, OH	
674	$NH(C{=}NH)NH_2$	1	Ph	CH_2CH_2CN	OH, OH	
675	$NH(C{=}NH)NH_2$	1	Ph	$CH_2CH_2CH_2CN$	OH, OH	
676	$NH(C{=}NH)NH_2$	1	Ph	CF_3	OH, OH	

677	NH(C=NH)NH_2	1	Ph	CF_2CF_3	OH, OH
678	NH(C=NH)NH_2	1	Ph	$CF_2CF_2CF_3$	OH, OH
679	NH(C=NH)NH_2	1	Ph	$CF_2CF_2CF_2CF_3$	OH, OH
680	NH(C=NH)NH_2	1	Ph	F_5-Ph	OH, OH
681	NH(C=NH)NH_2	1	Ph	CH_2CO_2H	OH, OH
682	NH(C=NH)NH_2	1	Ph	$(CH_2)_2CO_2H$	OH, OH
683	NH(C=NH)NH_2	1	Ph	$(CH_2)_3CO_2H$	OH, OH
684	NH(C=NH)NH_2	1	Ph	CH_2CN_4H	OH, OH
685	NH(C=NH)NH_2	1	Ph	$(CH_2)_2CN_4H$	OH, OH
686	NH(C=NH)NH_2	1	Ph	$(CH_2)_3CN_4H$	OH, OH
687	NH(C=NH)NH_2	1	Ph	CH_2NO_2	OH, OH
688	NH(C=NH)NH_2	1	Ph	$(CH_2)_2NO_2$	OH, OH
689	NH(C=NH)NH_2	1	Ph	$(CH_2)_3NO_2$	OH, OH
690	NH(C=NH)NH_2	1	Ph	CH_2OH	OH, OH
691	NH(C=NH)NH_2	1	Ph	$(CH_2)_2OH$	OH, OH
692	NH(C=NH)NH_2	1	Ph	$(CH_2)_3OH$	OH, OH
693	NH(C=NH)NH_2	1	Ph	CH_2CO_2Me	OH, OH
694	NH(C=NH)NH_2	1	Ph	$(CH_2)_2CO_2Me$	OH, OH
695	NH(C=NH)NH_2	1	Ph	$(CH_2)_3CO_2Me$	OH, OH
696	NH(C=NH)NH_2	1	Ph	Ph	OH, OH
697	NH(C=NH)NH_2	1	Ph	$PhCH_2$	OH, OH
698	NH(C=NH)NH_2	1	Ph	$Ph(CH_2)_2$	OH, OH
699	NH(C=NH)NH_2	1	Ph	3-NO_2-Ph	OH, OH
700	NH(C=NH)NH_2	1	Ph	4-NO_2-Ph	OH, OH
701	NH(C=NH)NH_2	1	Ph	3-CO_2H-Ph	OH, OH
702	NH(C=NH)NH_2	1	Ph	4-CO_2H-Ph	OH, OH
703	NH(C=NH)NH_2	1	Ph	3-CN_4H-Ph	OH, OH
704	NH(C=NH)NH_2	1	Ph	4-CN_4H-Ph	OH, OH
705	NH(C=NH)NH_2	1	Ph	3-($HOCH_2$)-Ph	OH, OH
706	NH(C=NH)NH_2	1	Ph	4-($HOCH_2$)-Ph	OH, OH
707	-S-(C=NH)NH_2	1	Ph	H	(+)-pin
708	-S-(C=NH)NH_2	1	Ph	Methyl	(+)-pin
709	-S-(C=NH)NH_2	1	Ph	Ethyl	(+)-pin
710	-S-(C=NH)NH_2	1	Ph	n-Propyl	(+)-pin
711	-S-(C=NH)NH_2	1	Ph	n-Butyl	(+)-pin
712	-S-(C=NH)NH_2	1	Ph	CH_2SCH_3	(+)-pin
713	-S-(C=NH)NH_2	1	Ph	$CH_2(SO)CH_3$	(+)-pin
714	-S-(C=NH)NH_2	1	Ph	$CH_2(SO_2)CH_3$	(+)-pin
715	-S-(C=NH)NH_2	1	Ph	$CH_2CH_2SCH_3$	(+)-pin
716	-S-(C=NH)NH_2	1	Ph	$CH_2CH_2(SO)CH_3$	(+)-pin

717	-S-(C=NH)NH$_2$	1	Ph	$CH_2CH_2(SO)_2CH_3$	(+)-pin
718	-S-(C=NH)NH$_2$	1	Ph	CH_2CN	(+)-pin
719	-S-(C=NH)NH$_2$	1	Ph	CH_2CH_2CN	(+)-pin
720	-S-(C=NH)NH$_2$	1	Ph	$CH_2CH_2CH_2CN$	(+)-pin
721	-S-(C=NH)NH$_2$	1	Ph	CF_3	(+)-pin
722	-S-(C=NH)NH$_2$	1	Ph	CF_2CF_3	(+)-pin
723	-S-(C=NH)NH$_2$	1	Ph	$CF_2CF_2CF_3$	(+)-pin
724	-S-(C=NH)NH$_2$	1	Ph	$CF_2CF_2CF_2CF_3$	(+)-pin
725	-S-(C=NH)NH$_2$	1	Ph	F_5-Ph	(+)-pin
726	-S-(C=NH)NH$_2$	1	Ph	CH_2CO_2H	(+)-pin
727	-S-(C=NH)NH$_2$	1	Ph	$(CH_2)_2CO_2H$	(+)-pin
728	-S-(C=NH)NH$_2$	1	Ph	$(CH_2)_3CO_2H$	(+)-pin
729	-S-(C=NH)NH$_2$	1	Ph	CH_2CN_4H	(+)-pin
730	-S-(C=NH)NH$_2$	1	Ph	$(CH_2)_2CN_4H$	(+)-pin
731	-S-(C=NH)NH$_2$	1	Ph	$(CH_2)_3CN_4H$	(+)-pin
732	-S-(C=NH)NH$_2$	1	Ph	CH_2NO_2	(+)-pin
733	-S-(C=NH)NH$_2$	1	Ph	$(CH_2)_2NO_2$	(+)-pin
734	-S-(C=NH)NH$_2$	1	Ph	$(CH_2)_3NO_2$	(+)-pin
735	-S-(C=NH)NH$_2$	1	Ph	CH_2OH	(+)-pin
736	-S-(C=NH)NH$_2$	1	Ph	$(CH_2)_2OH$	(+)-pin
737	-S-(C=NH)NH$_2$	1	Ph	$(CH_2)_3OH$	(+)-pin
738	-S-(C=NH)NH$_2$	1	Ph	CH_2CO_2Me	(+)-pin
739	-S-(C=NH)NH$_2$	1	Ph	$(CH_2)_2CO_2Me$	(+)-pin
740	-S-(C=NH)NH$_2$	1	Ph	$(CH_2)_3CO_2Me$	(+)-pin
741	-S-(C=NH)NH$_2$	1	Ph	Ph	(+)-pin
742	-S-(C=NH)NH$_2$	1	Ph	3-NO_2-Ph	(+)-pin
743	-S-(C=NH)NH$_2$	1	Ph	4-NO_2-Ph	(+)-pin
744	-S-(C=NH)NH$_2$	1	Ph	3-CO_2H-Ph	(+)-pin
745	-S-(C=NH)NH$_2$	1	Ph	4-CO_2H-Ph	(+)-pin
746	-S-(C=NH)NH$_2$	1	Ph	3-CN_4H-Ph	(+)-pin
747	-S-(C=NH)NH$_2$	1	Ph	4-CN_4H-Ph	(+)-pin
748	-S-(C=NH)NH$_2$	1	Ph	3-($HOCH_2$)-Ph	(+)-pin
749	-S-(C=NH)NH$_2$	1	Ph	4-($HOCH_2$)-Ph	(+)-pin
750	-S-(C=NH)NH$_2$	1	Ph	H	OH, OH
751	-S-(C=NH)NH$_2$	1	Ph	Methyl	OH, OH
752	-S-(C=NH)NH$_2$	1	Ph	Ethyl	OH, OH
753	-S-(C=NH)NH$_2$	1	Ph	n-Propyl	OH, OH
754	-S-(C=NH)NH$_2$	1	Ph	n-Butyl	OH, OH
755	-S-(C=NH)NH$_2$	1	Ph	CH_2SCH_3	OH, OH
756	-S-(C=NH)NH$_2$	1	Ph	$CH_2(SO)CH_3$	OH, OH

757	$-S-(C=NH)NH_2$	1	Ph	$CH_2(SO_2)CH_3$	OH, OH
758	$-S-(C=NH)NH_2$	1	Ph	$CH_2CH_2SCH_3$	OH, OH
759	$-S-(C=NH)NH_2$	1	Ph	$CH_2CH_2(SO)CH_3$	OH, OH
760	$-S-(C=NH)NH_2$	1	Ph	$CH_2CH_2(SO)_2CH_3$	OH, OH
761	$-S-(C=NH)NH_2$	1	Ph	CH_2CN	OH, OH
762	$-S-(C=NH)NH_2$	1	Ph	CH_2CH_2CN	OH, OH
763	$-S-(C=NH)NH_2$	1	Ph	$CH_2CH_2CH_2CN$	OH, OH
764	$-S-(C=NH)NH_2$	1	Ph	CF_3	OH, OH
765	$-S-(C=NH)NH_2$	1	Ph	CF_2CF_3	OH, OH
766	$-S-(C=NH)NH_2$	1	Ph	$CF_2CF_2CF_3$	OH, OH
767	$-S-(C=NH)NH_2$	1	Ph	$CF_2CF_2CF_2CF_3$	OH, OH
768	$-S-(C=NH)NH_2$	1	Ph	F_5-Ph	OH, OH
769	$-S-(C=NH)NH_2$	1	Ph	CH_2CO_2H	OH, OH
770	$-S-(C=NH)NH_2$	1	Ph	$(CH_2)_2CO_2H$	OH, OH
771	$-S-(C=NH)NH_2$	1	Ph	$(CH_2)_3CO_2H$	OH, OH
772	$-S-(C=NH)NH_2$	1	Ph	CH_2CN_4H	OH, OH
773	$-S-(C=NH)NH_2$	1	Ph	$(CH_2)_2CN_4H$	OH, OH
774	$-S-(C=NH)NH_2$	1	Ph	$(CH_2)_3CN_4H$	OH, OH
775	$-S-(C=NH)NH_2$	1	Ph	CH_2NO_2	OH, OH
776	$-S-(C=NH)NH_2$	1	Ph	$(CH_2)_2NO_2$	OH, OH
777	$-S-(C=NH)NH_2$	1	Ph	$(CH_2)_3NO_2$	OH, OH
778	$-S-(C=NH)NH_2$	1	Ph	CH_2OH	OH, OH
779	$-S-(C=NH)NH_2$	1	Ph	$(CH_2)_2OH$	OH, OH
780	$-S-(C=NH)NH_2$	1	Ph	$(CH_2)_3OH$	OH, OH
781	$-S-(C=NH)NH_2$	1	Ph	CH_2CO_2Me	OH, OH
782	$-S-(C=NH)NH_2$	1	Ph	$(CH_2)_2CO_2Me$	OH, OH
783	$-S-(C=NH)NH_2$	1	Ph	$(CH_2)_3CO_2Me$	OH, OH
784	$-S-(C=NH)NH_2$	1	Ph	Ph	OH, OH
785	$-S-(C=NH)NH_2$	1	Ph	$PhCH_2$	OH, OH
786	$-S-(C=NH)NH_2$	1	Ph	$Ph(CH_2)_2$	OH, OH
787	$-S-(C=NH)NH_2$	1	Ph	3-NO_2-Ph	OH, OH
788	$-S-(C=NH)NH_2$	1	Ph	4-NO_2-Ph	OH, OH
789	$-S-(C=NH)NH_2$	1	Ph	3-CO_2H-Ph	OH, OH
790	$-S-(C=NH)NH_2$	1	Ph	4-CO_2H-Ph	OH, OH
791	$-S-(C=NH)NH_2$	1	Ph	3-CN_4H-Ph	OH, OH
792	$-S-(C=NH)NH_2$	1	Ph	4-CN_4H-Ph	OH, OH
793	$-S-(C=NH)NH_2$	1	Ph	3-$(HOCH_2)$-Ph	OH, OH
794	$-S-(C=NH)NH_2$	1	Ph	4-$(HOCH_2)$-Ph	OH, OH
795	CH_2NH_2	2	Ph	H	(+)-pin
796	CH_2NH_2	2	Ph	H	OH, OH

797	OMe	1	Ph	H	(+)-pin
798	OMe	1	Ph	Methyl	(+)-pin
799	OMe	1	Ph	Ethyl	(+)-pin
800	OMe	1	Ph	n-Propyl	(+)-pin
801	OMe	1	Ph	n-Butyl	(+)-pin
802	OMe	1	Ph	CH_2SCH_3	(+)-pin
803	OMe	1	Ph	$CH_2(SO)CH_3$	(+)-pin
804	OMe	1	Ph	$CH_2(SO_2)CH_3$	(+)-pin
805	OMe	1	Ph	$CH_2CH_2SCH_3$	(+)-pin
806	OMe	1	Ph	$CH_2CH_2(SO)CH_3$	(+)-pin
807	OMe	1	Ph	$CH_2CH_2(SO)_2CH_3$	(+)-pin
808	OMe	1	Ph	CH_2CN	(+)-pin
809	OMe	1	Ph	CH_2CH_2CN	(+)-pin
810	OMe	1	Ph	$CH_2CH_2CH_2CN$	(+)-pin
811	OMe	1	Ph	CF_3	(+)-pin
812	OMe	1	Ph	CF_2CF_3	(+)-pin
813	OMe	1	Ph	$CF_2CF_2CF_3$	(+)-pin
814	OMe	1	Ph	$CF_2CF_2CF_2CF_3$	(+)-pin
815	OMe	1	Ph	F_5-Ph	(+)-pin
816	OMe	1	Ph	CH_2CO_2H	(+)-pin
817	OMe	1	Ph	$(CH_2)_2CO_2H$	(+)-pin
818	OMe	1	Ph	$(CH_2)_3CO_2H$	(+)-pin
819	OMe	1	Ph	CH_2CN_4H	(+)-pin
820	OMe	1	Ph	$(CH_2)_2CN_4H$	(+)-pin
821	OMe	1	Ph	$(CH_2)_3CN_4H$	(+)-pin
822	OMe	1	Ph	CH_2NO_2	(+)-pin
823	OMe	1	Ph	$(CH_2)_2NO_2$	(+)-pin
824	OMe	1	Ph	$(CH_2)_3NO_2$	(+)-pin
825	OMe	1	Ph	CH_2OH	(+)-pin
826	OMe	1	Ph	$(CH_2)_2OH$	(+)-pin
827	OMe	1	Ph	$(CH_2)_3OH$	(+)-pin
828	OMe	1	Ph	CH_2CO_2Me	(+)-pin
829	OMe	1	Ph	$(CH_2)_2CO_2Me$	(+)-pin
830	OMe	1	Ph	$(CH_2)_3CO_2Me$	(+)-pin
831	OMe	1	Ph	Ph	(+)-pin
832	OMe	1	Ph	$PhCH_2$	(+)-pin
833	OMe	1	Ph	$Ph(CH_2)_2$	(+)-pin
834	OMe	1	Ph	3-NO_2-Ph	(+)-pin
835	OMe	1	Ph	4-NO_2-Ph	(+)-pin
836	OMe	1	Ph	3-CO_2H-Ph	(+)-pin

837	OMe	1	Ph	4-CO_2H-Ph	(+)-pin
838	OMe	1	Ph	3-CN_4H-Ph	(+)-pin
839	OMe	1	Ph	4-CN_4H-Ph	(+)-pin
840	OMe	1	Ph	3-($HOCH_2$)-Ph	(+)-pin
841	OMe	1	Ph	4-($HOCH_2$)-Ph	(+)-pin
842	OMe	1	Ph	H	OH, OH
843	OMe	1	Ph	Methyl	OH, OH
844	OMe	1	Ph	Ethyl	OH, OH
845	OMe	1	Ph	n-Propyl	OH, OH
846	OMe	1	Ph	n-Butyl	OH, OH
847	OMe	1	Ph	CH_2SCH_3	OH, OH
848	OMe	1	Ph	$CH_2(SO)CH_3$	OH, OH
849	OMe	1	Ph	$CH_2(SO_2)CH_3$	OH, OH
850	OMe	1	Ph	$CH_2CH_2SCH_3$	OH, OH
851	OMe	1	Ph	$CH_2CH_2(SO)CH_3$	OH, OH
852	OMe	1	Ph	$CH_2CH_2(SO)_2CH_3$	OH, OH
853	OMe	1	Ph	CH_2CN	OH, OH
854	OMe	1	Ph	CH_2CH_2CN	OH, OH
855	OMe	1	Ph	$CH_2CH_2CH_2CN$	OH, OH
856	OMe	1	Ph	CF_3	OH, OH
857	OMe	1	Ph	CF_2CF_3	OH, OH
858	OMe	1	Ph	$CF_2CF_2CF_3$	OH, OH
859	OMe	1	Ph	$CF_2CF_2CF_2CF_3$	OH, OH
860	OMe	1	Ph	F_5-Ph	OH, OH
861	OMe	1	Ph	CH_2CO_2H	OH, OH
862	OMe	1	Ph	$(CH_2)_2CO_2H$	OH, OH
863	OMe	1	Ph	$(CH_2)_3CO_2H$	OH, OH
864	OMe	1	Ph	CH_2CN_4H	OH, OH
865	OMe	1	Ph	$(CH_2)_2CN_4H$	OH, OH
866	OMe	1	Ph	$(CH_2)_3CN_4H$	OH, OH
867	OMe	1	Ph	CH_2NO_2	OH, OH
868	OMe	1	Ph	$(CH_2)_2NO_2$	OH, OH
869	OMe	1	Ph	$(CH_2)_3NO_2$	OH, OH
870	OMe	1	Ph	CH_2OH	OH, OH
871	OMe	1	Ph	$(CH_2)_2OH$	OH, OH
872	OMe	1	Ph	$(CH_2)_3OH$	OH, OH
873	OMe	1	Ph	CH_2CO_2Me	OH, OH
874	OMe	1	Ph	$(CH_2)_2CO_2Me$	OH, OH
875	OMe	1	Ph	$(CH_2)_3CO_2Me$	OH, OH
876	OMe	1	Ph	Ph	OH, OH

877	OMe	1	Ph	$PhCH_2$	OH, OH	
878	OMe	1	Ph	$Ph(CH_2)_2$	OH, OH	
879	OMe	1	Ph	3-NO_2-Ph	OH, OH	
880	OMe	1	Ph	4-NO_2-Ph	OH, OH	
881	OMe	1	Ph	3-CO_2H-Ph	OH, OH	
882	OMe	1	Ph	4-CO_2H-Ph	OH, OH	
883	OMe	1	Ph	3-CN_4H-Ph	OH, OH	
884	OMe	1	Ph	4-CN_4H-Ph	OH, OH	
885	OMe	1	Ph	3-($HOCH_2$)-Ph	OH, OH	
886	OMe	1	Ph	4-($HOCH_2$)-Ph	OH, OH	
887	CH_2NH_2	1	$PhCH_2$	H	(+)-pin	AK
888	CH_2NH_2	1	$PhCH_2$	Methyl	(+)-pin	AL
889	CH_2NH_2	1	$PhCH_2$	Ethyl	(+)-pin	
890	CH_2NH_2	1	$PhCH_2$	n-Propyl	(+)-pin	AM
891	CH_2NH_2	1	$PhCH_2$	n-Butyl	(+)-pin	
892	CH_2NH_2	1	$PhCH_2$	CH_2SCH_3	(+)-pin	AN
893	CH_2NH_2	1	$PhCH_2$	$CH_2(SO)CH_3$	(+)-pin	
894	CH_2NH_2	1	$PhCH_2$	$CH_2(SO_2)CH_3$	(+)-pin	
895	CH_2NH_2	1	$PhCH_2$	$CH_2CH_2SCH_3$	(+)-pin	
896	CH_2NH_2	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin	
897	CH_2NH_2	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin	
898	CH_2NH_2	1	$PhCH_2$	CH_2CN	(+)-pin	CN
899	CH_2NH_2	1	$PhCH_2$	$CH_2CH_2CH_2CN$	(+)-pin	
900	CH_2NH_2	1	$PhCH_2$	CF_3	(+)-pin	
901	CH_2NH_2	1	$PhCH_2$	CF_2CF_3	(+)-pin	
902	CH_2NH_2	1	$PhCH_2$	$CF_2CF_2CF_3$	(+)-pin	
903	CH_2NH_2	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin	
904	CH_2NH_2	1	$PhCH_2$	F_5-Ph	(+)-pin	
905	CH_2NH_2	1	$PhCH_2$	CH_2CO_2H	(+)-pin	AW
906	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2CO_2H$	(+)-pin	
907	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3CO_2H$	(+)-pin	
908	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2CN_4H$	(+)-pin	
909	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3CN_4H$	(+)-pin	
910	CH_2NH_2	1	$PhCH_2$	CH_2NO_2	(+)-pin	
911	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2NO_2$	(+)-pin	
912	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3NO_2$	(+)-pin	
913	CH_2NH_2	1	$PhCH_2$	CH_2OH	(+)-pin	AO
914	CH_2NH_2	2	$PhCH_2$	CH_2OCH_2Ph	(+)-pin	AP
915	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	
916	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3OH$	(+)-pin	

917	CH_2NH_2	1	$PhCH_2$	CH_2CO_2Me	(+)-pin	CP
918	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2CO_2Me$	(+)-pin	
919	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3CO_2Me$	(+)-pin	
920	CH_2NH_2	1	$PhCH_2$	Ph	(+)-pin	AQ
921	CH_2NH_2	1	$PhCH_2$	$PhCH_2$	(+)-pin	AR
922	CH_2NH_2	1	$PhCH_2$	$Ph(CH_2)_2$	(+)-pin	
923	CH_2NH_2	1	$PhCH_2$	3-NO_2-Ph	(+)-pin	AS
924	CH_2NH_2	1	$PhCH_2$	4-NO_2-Ph	(+)-pin	
925	CH_2NH_2	1	$PhCH_2$	3-CO_2H-Ph	(+)-pin	
926	CH_2NH_2	1	$PhCH_2$	4-CO_2H-Ph	(+)-pin	
927	CH_2NH_2	1	$PhCH_2$	3-CN_4H-Ph	(+)-pin	
928	CH_2NH_2	1	$PhCH_2$	4-CN_4H-Ph	(+)-pin	
929	CH_2NH_2	1	$PhCH_2$	3-$(HOCH_2)$-Ph	(+)-pin	
930	CH_2NH_2	1	$PhCH_2$	4-$(HOCH_2)$-Ph	(+)-pin	
931	CH_2NH_2	1	$PhCH_2$	3-NH_2-Ph	(+)-pin	CQ
932	$NH(C{=}NH)NH_2$	1	$PhCH_2$	H	(+)-pin	
933	$NH(C{=}NH)NH_2$	1	$PhCH_2$	Methyl	(+)-pin	
934	$NH(C{=}NH)NH_2$	1	$PhCH_2$	Ethyl	(+)-pin	
935	$NH(C{=}NH)NH_2$	1	$PhCH_2$	n-Propyl	(+)-pin	
936	$NH(C{=}NH)NH_2$	1	$PhCH_2$	n-Butyl	(+)-pin	
937	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CH_2SCH_3	(+)-pin	
938	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$CH_2(SO)CH_3$	(+)-pin	
939	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$CH_2(SO_2)CH_3$	(+)-pin	
940	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$CH_2CH_2SCH_3$	(+)-pin	
941	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin	
942	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin	
943	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CH_2CN	(+)-pin	
944	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CH_2CH_2CN	(+)-pin	
945	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$CH_2CH_2CH_2CN$	(+)-pin	
946	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CF_3	(+)-pin	
947	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CF_2CF_3	(+)-pin	
948	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$CF_2CF_2CF_3$	(+)-pin	
949	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin	
950	$NH(C{=}NH)NH_2$	1	$PhCH_2$	F_5-Ph	(+)-pin	
951	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CH_2CO_2H	(+)-pin	
952	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$(CH_2)_2CO_2H$	(+)-pin	
953	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$(CH_2)_3CO_2H$	(+)-pin	
954	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CH_2CN_4H	(+)-pin	
955	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$(CH_2)_2CN_4H$	(+)-pin	
956	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$(CH_2)_3CN_4H$	(+)-pin	

957	NH(C=NH)NH$_2$	1	PhCH$_2$	CH$_2$NO$_2$	(+)-pin	
958	NH(C=NH)NH$_2$	1	PhCH$_2$	(CH$_2$)$_2$NO$_2$	(+)-pin	
959	NH(C=NH)NH$_2$	1	PhCH$_2$	(CH$_2$)$_3$NO$_2$	(+)-pin	
960	NH(C=NH)NH$_2$	1	PhCH$_2$	CH$_2$OH	(+)-pin	
961	NH(C=NH)NH$_2$	1	PhCH$_2$	(CH$_2$)$_2$OH	(+)-pin	
962	NH(C=NH)NH$_2$	1	PhCH$_2$	(CH$_2$)$_3$OH	(+)-pin	
963	NH(C=NH)NH$_2$	1	PhCH$_2$	CH$_2$CO$_2$Me	(+)-pin	
964	NH(C=NH)NH$_2$	1	PhCH$_2$	(CH$_2$)$_2$CO$_2$Me	(+)-pin	
965	NH(C=NH)NH$_2$	1	PhCH$_2$	(CH$_2$)$_3$CO$_2$Me	(+)-pin	
966	NH(C=NH)NH$_2$	1	PhCH$_2$	Ph	(+)-pin	
967	NH(C=NH)NH$_2$	1	PhCH$_2$	PhCH$_2$	(+)-pin	AT
968	NH(C=NH)NH$_2$	1	PhCH$_2$	Ph(CH$_2$)$_2$	(+)-pin	
969	NH(C=NH)NH$_2$	1	PhCH$_2$	3-NO$_2$-Ph	(+)-pin	AU
970	NH(C=NH)NH$_2$	1	PhCH$_2$	4-NO$_2$-Ph	(+)-pin	
971	NH(C=NH)NH$_2$	1	PhCH$_2$	3-CO$_2$H-Ph	(+)-pin	
972	NH(C=NH)NH$_2$	1	PhCH$_2$	4-CO$_2$H-Ph	(+)-pin	
973	NH(C=NH)NH$_2$	1	PhCH$_2$	3-CN$_4$H-Ph	(+)-pin	
974	NH(C=NH)NH$_2$	1	PhCH$_2$	4-CN$_4$H-Ph	(+)-pin	
975	NH(C=NH)NH$_2$	1	PhCH$_2$	3-(HOCH$_2$)-Ph	(+)-pin	
976	NH(C=NH)NH$_2$	1	PhCH$_2$	4-(HOCH$_2$)-Ph	(+)-pin	
977	CH$_2$NH$_2$	1	PhCH$_2$	H	OH, OH	AI
978	CH$_2$NH$_2$	1	PhCH$_2$	Methyl	OH, OH	
979	CH$_2$NH$_2$	1	PhCH$_2$	Ethyl	OH, OH	
980	CH$_2$NH$_2$	1	PhCH$_2$	n-Propyl	OH, OH	
981	CH$_2$NH$_2$	1	PhCH$_2$	n-Butyl	OH, OH	
982	CH$_2$NH$_2$	1	PhCH$_2$	CH$_2$SCH$_3$	OH, OH	
983	CH$_2$NH$_2$	1	PhCH$_2$	CH$_2$(SO)CH$_3$	OH, OH	
984	CH$_2$NH$_2$	1	PhCH$_2$	CH$_2$(SO$_2$)CH$_3$	OH, OH	
985	CH$_2$NH$_2$	1	PhCH$_2$	CH$_2$CH$_2$SCH$_3$	OH, OH	
986	CH$_2$NH$_2$	1	PhCH$_2$	CH$_2$CH$_2$(SO)CH$_3$	OH, OH	
987	CH$_2$NH$_2$	1	PhCH$_2$	CH$_2$CH$_2$(SO)$_2$CH$_3$	OH, OH	
988	CH$_2$NH$_2$	1	PhCH$_2$	CH$_2$CN	OH, OH	
989	CH$_2$NH$_2$	1	PhCH$_2$	CH$_2$CH$_2$CN	OH, OH	
990	CH$_2$NH$_2$	1	PhCH$_2$	CH$_2$CH$_2$CH$_2$CN	OH, OH	
991	CH$_2$NH$_2$	1	PhCH$_2$	CF$_3$	OH, OH	
992	CH$_2$NH$_2$	1	PhCH$_2$	CF$_2$CF$_3$	OH, OH	
993	CH$_2$NH$_2$	1	PhCH$_2$	CF$_2$CF$_2$CF$_3$	OH, OH	
994	CH$_2$NH$_2$	1	PhCH$_2$	CF$_2$CF$_2$CF$_2$CF$_3$	OH, OH	
995	CH$_2$NH$_2$	1	PhCH$_2$	F$_5$-Ph	OH, OH	
996	CH$_2$NH$_2$	1	PhCH$_2$	CH$_2$CO$_2$H	OH, OH	

997	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2CO_2H$	OH, OH	
998	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3CO_2H$	OH, OH	
999	CH_2NH_2	1	$PhCH_2$	CH_2CN_4H	OH, OH	
1000	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2CN_4H$	OH, OH	
1001	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3CN_4H$	OH, OH	
1002	CH_2NH_2	1	$PhCH_2$	CH_2NO_2	OH, OH	
1003	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2NO_2$	OH, OH	
1004	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3NO_2$	OH, OH	
1005	CH_2NH_2	1	$PhCH_2$	CH_2OH	OH, OH	
1006	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2OH$	OH, OH	
1007	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3OH$	OH, OH	
1008	CH_2NH_2	1	$PhCH_2$	CH_2CO_2Me	OH, OH	
1009	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2CO_2Me$	OH, OH	
1010	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3CO_2Me$	OH, OH	
1011	CH_2NH_2	1	$PhCH_2$	Ph	OH, OH	AV
1012	CH_2NH_2	1	$PhCH_2$	$PhCH_2$	OH, OH	
1013	CH_2NH_2	1	$PhCH_2$	$Ph(CH_2)_2$	OH, OH	
1014	CH_2NH_2	1	$PhCH_2$	3-NO_2-Ph	OH, OH	
1015	CH_2NH_2	1	$PhCH_2$	4-NO_2-Ph	OH, OH	
1016	CH_2NH_2	1	$PhCH_2$	3-CO_2H-Ph	OH, OH	
1017	CH_2NH_2	1	$PhCH_2$	4-CO_2H-Ph	OH, OH	
1018	CH_2NH_2	1	$PhCH_2$	3-CN_4H-Ph	OH, OH	
1019	CH_2NH_2	1	$PhCH_2$	4-CN_4H-Ph	OH, OH	
1020	CH_2NH_2	1	$PhCH_2$	3-$(HOCH_2)$-Ph	OH, OH	
1021	CH_2NH_2	1	$PhCH_2$	4-$(HOCH_2)$-Ph	OH, OH	
1022	CH_2NH_2	1	$PhCH_2$	F	(+)-pin	
1023	CH_2NH_2	1	$PhCH_2$	Cl	(+)-pin	
1024	CH_2NH_2	1	$PhCH_2$	Br	(+)-pin	
1025	CH_2NH_2	1	$PhCH_2$	I	(+)-pin	
1026	CH_2NH_2	1	$PhCH_2$	COOH	(+)-pin	
1027	CH_2NH_2	1	$PhCH_2$	COOMe	(+)-pin	
1028	CH_2NH_2	1	$PhCH_2$	CHO	(+)-pin	
1029	CH_2NH_2	1	$PhCH_2$	COMe	(+)-pin	
1030	CH_2NH_2	1	$PhCH_2$	NO_2	(+)-pin	
1031	CH_2NH_2	1	$PhCH_2$	CN	(+)-pin	
1032	CH_2NH_2	1	$PhCH_2$	isopropyl	(+)-pin	
1033	CH_2NH_2	1	$PhCH_2$	3-F-phenyl	(+)-pin	
1034	CH_2NH_2	1	$PhCH_2$	3-Cl-phenyl	(+)-pin	
1035	CH_2NH_2	1	$PhCH_2$	4-Br-phenyl	(+)-pin	
1036	CH_2NH_2	1	$PhCH_2$	4-I-phenyl	(+)-pin	

1037	CH_2NH_2	1	$PhCH_2$	3-CH_3-phenyl	(+)-pin
1038	CH_2NH_2	1	$PhCH_2$	3-MeO-phenyl	(+)-pin
1039	CH_2NH_2	1	$PhCH_2$	3-CN-phenyl	(+)-pin
1040	CH_2NH_2	1	$PhCH_2$	4-CN-phenyl	(+)-pin
1041	CH_2NH_2	1	$PhCH_2$	3-NC-phenyl	(+)-pin
1042	CH_2NH_2	1	$PhCH_2$	4-NC-phenyl	(+)-pin
1043	CH_2NH_2	1	$PhCH_2$	3-CF_3-phenyl	(+)-pin
1044	CH_2NH_2	1	$PhCH_2$	3-CH_3S-phenyl	(+)-pin
1045	CH_2NH_2	1	$PhCH_2$	3-CH_3SO-phenyl	(+)-pin
1046	CH_2NH_2	1	$PhCH_2$	3-CH_3SO_2-phenyl	(+)-pin
1047	CH_2NH_2	1	$PhCH_2$	3-$N(Me)_2$-phenyl	(+)-pin
1048	CH_2NH_2	1	$PhCH_2$	3-MeCO-phenyl	(+)-pin
1049	CH_2NH_2	1	$PhCH_2$	3-CHO-phenyl	(+)-pin
1050	CH_2NH_2	1	$PhCH_2$	3-CO_2Me-phenyl	(+)-pin
1051	CH_2NH_2	1	$PhCH_2$	3-$CONH_2$-phenyl	(+)-pin
1052	CH_2NH_2	1	$PhCH_2$	$CH_2NHSO_2CF_3$	(+)-pin
1053	CH_2NH_2	1	$PhCH_2$	$CH_2NHSO_2CH_3$	(+)-pin
1054	CH_2NH_2	1	$PhCH_2$	CH_2CO_2-i-propyl	(+)-pin
1055	CH_2NH_2	1	$PhCH_2$	CH_2CHO	(+)-pin
1056	CH_2NH_2	1	$PhCH_2$	CH_2CH_2OMe	(+)-pin
1057	CH_2NH_2	1	$PhCH_2$	CH_2CH_2O-i-propyl	(+)-pin
1058	CH_2NH_2	1	$PhCH_2$	CH_2OCOMe	(+)-pin
1059	CH_2NH_2	1	$PhCH_2$	CH_2OCO-i-propyl	(+)-pin
1060	CH_2NH_2	1	$PhCH_2$	CH_2OCO-Phenyl	(+)-pin
1061	CH_2NH_2	1	$PhCH_2$	$CH_2NHCOMe$	(+)-pin
1062	CH_2NH_2	1	$PhCH_2$	CH_2NHCO-i-propyl	(+)-pin
1063	CH_2NH_2	1	$PhCH_2$	F	OH, OH
1064	CH_2NH_2	1	$PhCH_2$	Cl	OH, OH
1065	CH_2NH_2	1	$PhCH_2$	Br	OH, OH
1066	CH_2NH_2	1	$PhCH_2$	I	OH, OH
1067	CH_2NH_2	1	$PhCH_2$	COOH	OH, OH
1068	CH_2NH_2	1	$PhCH_2$	COOMe	OH, OH
1069	CH_2NH_2	1	$PhCH_2$	CHO	OH, OH
1070	CH_2NH_2	1	$PhCH_2$	COMe	OH, OH
1071	CH_2NH_2	1	$PhCH_2$	NO_2	OH, OH
1072	CH_2NH_2	1	$PhCH_2$	CN	OH, OH
1073	CH_2NH_2	1	$PhCH_2$	isopropyl	OH, OH
1074	CH_2NH_2	1	$PhCH_2$	3-F-phenyl	OH, OH
1075	CH_2NH_2	1	$PhCH_2$	3-Cl-phenyl	OH, OH
1076	CH_2NH_2	1	$PhCH_2$	4-Br-phenyl	OH, OH

1077	CH_2NH_2	1	$PhCH_2$	4-I-phenyl	OH, OH
1078	CH_2NH_2	1	$PhCH_2$	3-CH_3-phenyl	OH, OH
1079	CH_2NH_2	1	$PhCH_2$	3-MeO-phenyl	OH, OH
1080	CH_2NH_2	1	$PhCH_2$	3-CN-phenyl	OH, OH
1081	CH_2NH_2	1	$PhCH_2$	4-CN-phenyl	OH, OH
1082	CH_2NH_2	1	$PhCH_2$	3-NC-phenyl	OH, OH
1083	CH_2NH_2	1	$PhCH_2$	4-NC-phenyl	OH, OH
1084	CH_2NH_2	1	$PhCH_2$	3-CF_3-phenyl	OH, OH
1085	CH_2NH_2	1	$PhCH_2$	3-CH_3S-phenyl	OH, OH
1086	CH_2NH_2	1	$PhCH_2$	3-CH_3SO-phenyl	OH, OH
1087	CH_2NH_2	1	$PhCH_2$	3-CH_3SO_2-phenyl	OH, OH
1088	CH_2NH_2	1	$PhCH_2$	3-$N(Me)_2$-phenyl	OH, OH
1089	CH_2NH_2	1	$PhCH_2$	3-MeCO-phenyl	OH, OH
1090	CH_2NH_2	1	$PhCH_2$	3-CHO-phenyl	OH, OH
1091	CH_2NH_2	1	$PhCH_2$	3-CO_2Me-phenyl	OH, OH
1092	CH_2NH_2	1	$PhCH_2$	3-$CONH_2$-phenyl	OH, OH
1093	CH_2NH_2	1	$PhCH_2$	$CH_2NHSO_2CF_3$	OH, OH
1094	CH_2NH_2	1	$PhCH_2$	$CH_2NHSO_2CH_3$	OH, OH
1095	CH_2NH_2	1	$PhCH_2$	CH_2CO_2-i-propyl	CH, OH
1096	CH_2NH_2	1	$PhCH_2$	CH_2CHO	OH, OH
1097	CH_2NH_2	1	$PhCH_2$	CH_2CH_2OMe	OH, OH
1098	CH_2NH_2	1	$PhCH_2$	CH_2CH_2O-i-propyl	OH, OH
1099	CH_2NH_2	1	$PhCH_2$	CH_2OCOMe	OH, OH
1100	CH_2NH_2	1	$PhCH_2$	CH_2OCO-i-propyl	OH, OH
1101	CH_2NH_2	1	$PhCH_2$	CH_2OCO-Phenyl	OH, OH
1102	CH_2NH_2	1	$PhCH_2$	$CH_2NHCOMe$	OH, OH
1103	CH_2NH_2	1	$PhCH_2$	CH_2NHCO-i-propyl	OH, OH
1104	CH_2NH_2	1	3,4-Di-F-$PhCH_2$	CH_2CN	(+)-pin
1105	CH_2NH_2	1	3,4-Di-Cl-$PhCH_2$	CH_2CN	(+)-pin
1106	CH_2NH_2	1	4-Br-$PhCH_2$	CH_2CN	(+)-pin
1107	CH_2NH_2	1	4-I-$PhCH_2$	CH_2CN	(+)-pin
1108	CH_2NH_2	1	4-Me-$PhCH_2$	CH_2CN	(+)-pin
1109	CH_2NH_2	1	2-MeO-$PhCH_2$	CH_2CN	(+)-pin
1110	CH_2NH_2	1	2-CN-$PhCH_2$	CH_2CN	(+)-pin

1111	CH_2NH_2	1	2-NC-$PhCH_2$	CH_2CN	(+)-pin
1112	CH_2NH_2	1	2-NO_2-$PhCH_2$	CH_2CN	(+)-pin
1113	CH_2NH_2	1	2-CF_3-$PhCH_2$	CH_2CN	(+)-pin
1114	CH_2NH_2	1	2-MeS-$PhCH_2$	CH_2CN	(+)-pin
1115	CH_2NH_2	1	3-MeSO-$PhCH_2$	CH_2CN	(+)-pin
1116	CH_2NH_2	1	3-$MeSO_2$-$PhCH_2$	CH_2CN	(+)-pin
1117	CH_2NH_2	1	2-NH_2-$PhCH_2$	CH_2CN	(+)-pin
1118	CH_2NH_2	1	3-NHMe-$PhCH_2$	CH_2CN	(+)-pin
1119	CH_2NH_2	1	2-CHO-$PhCH_2$	CH_2CN	(+)-pin
1120	CH_2NH_2	1	3-MeCO-$PhCH_2$	CH_2CN	(+)-pin
1121	CH_2NH_2	1	2-MeO_2C-$PhCH_2$	CH_2CN	(+)-pin
1122	CH_2NH_2	1	2-NH_2OC-$PhCH_2$	CH_2CN	(+)-pin
1123	CH_2NH_2	1	2-$HOCH_2$-$PhCH_2$	CH_2CN	(+)-pin
1124	CH_2NH_2	1	3,4-Di-F-$PhCH_2$	CH_2CN	OH, OH
1125	CH_2NH_2	1	3,4-Di-Cl-$PhCH_2$	CH_2CN	OH, OH
1126	CH_2NH_2	1	4-Br-$PhCH_2$	CH_2CN	OH, OH
1127	CH_2NH_2	1	4-I-$PhCH_2$	CH_2CN	OH, OH
1128	CH_2NH_2	1	4-Me-$PhCH_2$	CH_2CN	OH, OH
1129	CH_2NH_2	1	2-MeO-$PhCH_2$	CH_2CN	OH, OH
1130	CH_2NH_2	1	2-CN-$PhCH_2$	CH_2CN	OH, OH

1131	CH_2NH_2	1	2-NC-PhCH$_2$	CH_2CN	OH, OH
1132	CH_2NH_2	1	2-NO$_2$-PhCH$_2$	CH_2CN	OH, OH
1133	CH_2NH_2	1	2-CF$_3$-PhCH$_2$	CH_2CN	OH, OH
1134	CH_2NH_2	1	2-MeS-PhCH$_2$	CH_2CN	OH, OH
1135	CH_2NH_2	1	3-MeSO-PhCH$_2$	CH_2CN	OH, OH
1136	CH_2NH_2	1	3-MeSO$_2$-PhCH$_2$	CH_2CN	OH, OH
1137	CH_2NH_2	1	2-NH$_2$-PhCH$_2$	CH_2CN	OH, OH
1138	CH_2NH_2	1	3-NHMe-PhCH$_2$	CH_2CN	OH, OH
1139	CH_2NH_2	1	2-CHO-PhCH$_2$	CH_2CN	OH, OH
1140	CH_2NH_2	1	3-MeCO-PhCH$_2$	CH_2CN	OH, OH
1141	CH_2NH_2	1	2-MeO$_2$C-PhCH$_2$	CH_2CN	OH, OH
1142	CH_2NH_2	1	2-NH$_2$OC-PhCH$_2$	CH_2CN	OH, OH
1143	CH_2NH_2	1	2-HOCH$_2$-PhCH$_2$	CH_2CN	OH, OH
1144	NH(C=NH)NH$_2$	1	PhCH$_2$	H	OH, OH
1145	NH(C=NH)NH$_2$	1	PhCH$_2$	Methyl	OH, OH
1146	NH(C=NH)NH$_2$	1	PhCH$_2$	Ethyl	OH, OH
1147	NH(C=NH)NH$_2$	1	PhCH$_2$	n-Propyl	OH, OH
1148	NH(C=NH)NH$_2$	1	PhCH$_2$	n-Butyl	OH, OH
1149	NH(C=NH)NH$_2$	1	PhCH$_2$	CH_2SCH_3	OH, OH
1150	NH(C=NH)NH$_2$	1	PhCH$_2$	$CH_2(SO)CH_3$	OH, OH
1151	NH(C=NH)NH$_2$	1	PhCH$_2$	$CH_2(SO_2)CH_3$	OH, OH
1152	NH(C=NH)NH$_2$	1	PhCH$_2$	$CH_2CH_2SCH_3$	OH, OH
1153	NH(C=NH)NH$_2$	1	PhCH$_2$	$CH_2CH_2(SO)CH_3$	OH, OH
1154	NH(C=NH)NH$_2$	1	PhCH$_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH
1155	NH(C=NH)NH$_2$	1	PhCH$_2$	CH_2CN	OH, OH
1156	NH(C=NH)NH$_2$	1	PhCH$_2$	CH_2CH_2CN	OH, OH
1157	NH(C=NH)NH$_2$	1	PhCH$_2$	$CH_2CH_2CH_2CN$	OH, OH

1158	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CF_3	OH, OH
1159	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CF_2CF_3	OH, OH
1160	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$CF_2CF_2CF_3$	OH, OH
1161	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	OH, OH
1162	$NH(C{=}NH)NH_2$	1	$PhCH_2$	F_5-Ph	OH, OH
1163	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CH_2CO_2H	OH, OH
1164	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$(CH_2)_2CO_2H$	OH, OH
1165	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$(CH_2)_3CO_2H$	OH, OH
1166	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CH_2CN_4H	OH, OH
1167	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$(CH_2)_2CN_4H$	OH, OH
1168	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$(CH_2)_3CN_4H$	OH, OH
1169	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CH_2NO_2	OH, OH
1170	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$(CH_2)_2NO_2$	OH, OH
1171	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$(CH_2)_3NO_2$	OH, OH
1172	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CH_2OH	OH, OH
1173	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$(CH_2)_2OH$	OH, OH
1174	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$(CH_2)_3OH$	OH, OH
1175	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CH_2CO_2Me	OH, OH
1176	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$(CH_2)_2CO_2Me$	OH, OH
1177	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$(CH_2)_3CO_2Me$	OH, OH
1178	$NH(C{=}NH)NH_2$	1	$PhCH_2$	Ph	OH, OH
1179	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$PhCH_2$	OH, OH
1180	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$Ph(CH_2)_2$	OH, OH
1181	$NH(C{=}NH)NH_2$	1	$PhCH_2$	3-NO_2-Ph	OH, OH
1182	$NH(C{=}NH)NH_2$	1	$PhCH_2$	4-NO_2-Ph	OH, OH
1183	$NH(C{=}NH)NH_2$	1	$PhCH_2$	3-CO_2H-Ph	OH, OH
1184	$NH(C{=}NH)NH_2$	1	$PhCH_2$	4-CO_2H-Ph	OH, OH
1185	$NH(C{=}NH)NH_2$	1	$PhCH_2$	3-CN_4H-Ph	OH, OH
1186	$NH(C{=}NH)NH_2$	1	$PhCH_2$	4-CN_4H-Ph	OH, OH
1187	$NH(C{=}NH)NH_2$	1	$PhCH_2$	3-$(HOCH_2)$-Ph	OH, OH
1188	$NH(C{=}NH)NH_2$	1	$PhCH_2$	4-$(HOCH_2)$-Ph	OH, OH
1189	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CH_2CHO	(+)-pin
1190	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CH_2CHO	OH, OH
1191	CH_2NH_2	1	$PhCH_2$	CH_2CHO	(+)-pin
1192	CH_2NH_2	1	$PhCH_2$	CH_2CHO	OH, OH
1193	-S-$(C{=}NH)NH_2$	1	$PhCH_2$	H	(+)-pin
1194	-S-$(C{=}NH)NH_2$	1	$PhCH_2$	Methyl	(+)-pin
1195	-S-$(C{=}NH)NH_2$	1	$PhCH_2$	Ethyl	(+)-pin
1196	-S-$(C{=}NH)NH_2$	1	$PhCH_2$	n-Propyl	(+)-pin
1197	-S-$(C{=}NH)NH_2$	1	$PhCH_2$	n-Butyl	(+)-pin

1198	-S-(C=NH)NH2	1	PhCH2	CH2SCH3	(+)-pin
1199	-S-(C=NH)NH2	1	PhCH2	CH2(SO)CH3	(+)-pin
1200	-S-(C=NH)NH2	1	PhCH2	CH2(SO2)CH3	(+)-pin
1201	-S-(C=NH)NH2	1	PhCH2	CH2CH2SCH3	(+)-pin
1202	-S-(C=NH)NH2	1	PhCH2	CH2CH2(SO)CH3	(+)-pin
1203	-S-(C=NH)NH2	1	PhCH2	CH2CH2(SO)2CH3	(+)-pin
1204	-S-(C=NH)NH2	1	PhCH2	CH2CN	(+)-pin
1205	-S-(C=NH)NH2	1	PhCH2	CH2CH2CN	(+)-pin
1206	-S-(C=NH)NH2	1	PhCH2	CH2CH2CH2CN	(+)-pin
1207	-S-(C=NH)NH2	1	PhCH2	CF3	(+)-pin
1208	-S-(C=NH)NH2	1	PhCH2	CF2CF3	(+)-pin
1209	-S-(C=NH)NH2	1	PhCH2	CF2CF2CF3	(+)-pin
1210	-S-(C=NH)NH2	1	PhCH2	CF2CF2CF2CF3	(+)-pin
1211	-S-(C=NH)NH2	1	PhCH2	F5-Ph	(+)-pin
1212	-S-(C=NH)NH2	1	PhCH2	CH2CO2H	(+)-pin
1213	-S-(C=NH)NH2	1	PhCH2	(CH2)2CO2H	(+)-pin
1214	-S-(C=NH)NH2	1	PhCH2	(CH2)3CO2H	(+)-pin
1215	-S-(C=NH)NH2	1	PhCH2	CH2CN4H	(+)-pin
1216	-S-(C=NH)NH2	1	PhCH2	(CH2)2CN4H	(+)-pin
1217	-S-(C=NH)NH2	1	PhCH2	(CH2)3CN4H	(+)-pin
1218	-S-(C=NH)NH2	1	PhCH2	CH2NO2	(+)-pin
1219	-S-(C=NH)NH2	1	PhCH2	(CH2)2NO2	(+)-pin
1220	-S-(C=NH)NH2	1	PhCH2	(CH2)3NO2	(+)-pin
1221	-S-(C=NH)NH2	1	PhCH2	CH2OH	(+)-pin
1222	-S-(C=NH)NH2	1	PhCH2	(CH2)2OH	(+)-pin
1223	-S-(C=NH)NH2	1	PhCH2	(CH2)3OH	(+)-pin
1224	-S-(C=NH)NH2	1	PhCH2	CH2CO2Me	(+)-pin
1225	-S-(C=NH)NH2	1	PhCH2	(CH2)2CO2Me	(+)-pin
1226	-S-(C=NH)NH2	1	PhCH2	(CH2)3CO2Me	(+)-pin
1227	-S-(C=NH)NH2	1	PhCH2	Ph	(+)-pin
1228	-S-(C=NH)NH2	1	PhCH2	PhCH2	(+)-pin
1229	-S-(C=NH)NH2	1	PhCH2	Ph(CH2)2	(+)-pin
1230	-S-(C=NH)NH2	1	PhCH2	3-NO2-Ph	(+)-pin
1231	-S-(C=NH)NH2	1	PhCH2	4-NO2-Ph	(+)-pin
1232	-S-(C=NH)NH2	1	PhCH2	3-CO2H-Ph	(+)-pin
1233	-S-(C=NH)NH2	1	PhCH2	4-CO2H-Ph	(+)-pin
1234	-S-(C=NH)NH2	1	PhCH2	3-CN4H-Ph	(+)-pin
1235	-S-(C=NH)NH2	1	PhCH2	4-CN4H-Ph	(+)-pin
1236	-S-(C=NH)NH2	1	PhCH2	3-(HOCH2)-Ph	(+)-pin
1237	-S-(C=NH)NH2	1	PhCH2	4-(HOCH2)-Ph	(+)-pin

1238	-CN	1	$PhCH_2$	CH_2CN	(+)-pin
1239	$-NO_2$	1	$PhCH_2$	CH_2CN	(+)-pin
1240	$-CH_2NO_2$	1	$PhCH_2$	CH_2CN	(+)-pin
1241	$-CF_3$	1	$PhCH_2$	CH_2CN	(+)-pin
1242	$-NH_2$	1	$PhCH_2$	CH_2CN	(+)-pin
1243	-NHOH	1	$PhCH_2$	CH_2CN	(+)-pin
1244	-NHOMe	1	$PhCH_2$	CH_2CN	(+)-pin
1245	$-CH_2NHOH$	1	$PhCH_2$	CH_2CN	(+)-pin
1246	$-CH_2NHOMe$	1	$PhCH_2$	CH_2CN	(+)-pin
1247	$-NH(C{=}NH)CH_3$	1	$PhCH_2$	CH_2CN	(+)-pin
1248	-NH(C=NH)NHOH	1	$PhCH_2$	CH_2CN	(+)-pin
1249	$-NH(C{=}NH)NHNH_2$	1	$PhCH_2$	CH_2CN	(+)-pin
1250	-NH(C=NH)NHCN	1	$PhCH_2$	CH_2CN	(+)-pin
1251	$-NH(C{=}NH)NHCH_3$	1	$PhCH_2$	CH_2CN	(+)-pin
1252	$-NH(C{=}NH)NHCOCH_3$	1	$PhCH_2$	CH_2CN	(+)-pin
1253	$-C(=NH)NH_2$	1	$PhCH_2$	CH_2CN	(+)-pin
1254	-C(=NH)NHMe	1	$PhCH_2$	CH_2CN	(+)-pin
1255	-C(=NH)NHCOMe	1	$PhCH_2$	CH_2CN	(+)-pin
1256	$-CONH_2$	1	$PhCH_2$	CH_2CN	(+)-pin
1257	$-CONHCH_3$	1	$PhCH_2$	CH_2CN	(+)-pin
1258	$-CO_2CH_3$	1	$PhCH_2$	CH_2CN	(+)-pin
1259	-OH	1	$PhCH_2$	CH_2CN	(+)-pin
1260	$-CH_2OH$	1	$PhCH_2$	CH_2CN	(+)-pin
1261	$-SCH_3$	1	$PhCH_2$	CH_2CN	(+)-pin
1262	$-SOCH_3$	1	$PhCH_2$	CH_2CN	(+)-pin
1263	$-SO_2CH_3$	1	$PhCH_2$	CH_2CN	(+)-pin
1264	$-S-(C{=}NH)NHCH_3$	1	$PhCH_2$	CH_2CN	(+)-pin
1265	$-S-(C{=}NH)NHCOCH_3$	1	$PhCH_2$	CH_2CN	(+)-pin
1266	$-S-(C{=}NH)NH_2$	1	$PhCH_2$	H	OH, OH
1267	$-S-(C{=}NH)NH_2$	1	$PhCH_2$	Methyl	OH, OH
1268	$-S-(C{=}NH)NH_2$	1	$PhCH_2$	Ethyl	OH, OH
1269	$-S-(C{=}NH)NH_2$	1	$PhCH_2$	n-Propyl	OH, OH
1270	$-S-(C{=}NH)NH_2$	1	$PhCH_2$	n-Butyl	OH, OH
1271	$-S-(C{=}NH)NH_2$	1	$PhCH_2$	CH_2SCH_3	OH, OH
1272	$-S-(C{=}NH)NH_2$	1	$PhCH_2$	$CH_2(SO)CH_3$	OH, OH
1273	$-S-(C{=}NH)NH_2$	1	$PhCH_2$	$CH_2(SO_2)CH_3$	OH, OH
1274	$-S-(C{=}NH)NH_2$	1	$PhCH_2$	$CH_2CH_2SCH_3$	OH, OH
1275	$-S-(C{=}NH)NH_2$	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	OH, OH

1276	-S-(C=NH)NH_2	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH
1277	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2CN	OH, OH
1278	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2CH_2CN	OH, OH
1279	-S-(C=NH)NH_2	1	$PhCH_2$	$CH_2CH_2CH_2CN$	OH, OH
1280	-S-(C=NH)NH_2	1	$PhCH_2$	CF_3	OH, OH
1281	-S-(C=NH)NH_2	1	$PhCH_2$	CF_2CF_3	OH, OH
1282	-S-(C=NH)NH_2	1	$PhCH_2$	$CF_2CF_2CF_3$	OH, OH
1283	-S-(C=NH)NH_2	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	OH, OH
1284	-S-(C=NH)NH_2	1	$PhCH_2$	F_5-Ph	OH, OH
1285	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2CO_2H	OH, OH
1286	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2CO_2H$	OH, OH
1287	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3CO_2H$	OH, OH
1288	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2CN_4H	OH, OH
1289	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2CN_4H$	OH, OH
1290	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3CN_4H$	OH, OH
1291	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2NO_2	OH, OH
1292	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2NO_2$	OH, OH
1293	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3NO_2$	OH, OH
1294	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2OH	OH, OH
1295	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2OH$	OH, OH
1296	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3OH$	OH, OH
1297	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2CO_2Me	OH, OH
1298	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2CO_2Me$	OH, OH
1299	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3CO_2Me$	OH, OH
1300	-S-(C=NH)NH_2	1	$PhCH_2$	Ph	OH, OH
1301	-S-(C=NH)NH_2	1	$PhCH_2$	$PhCH_2$	OH, OH
1302	-S-(C=NH)NH_2	1	$PhCH_2$	$Ph(CH_2)_2$	OH, OH
1303	-S-(C=NH)NH_2	1	$PhCH_2$	3-NO_2-Ph	OH, OH
1304	-S-(C=NH)NH_2	1	$PhCH_2$	4-NO_2-Ph	OH, OH
1305	-S-(C=NH)NH_2	1	$PhCH_2$	3-CO_2H-Ph	OH, OH
1306	-S-(C=NH)NH_2	1	$PhCH_2$	4-CO_2H-Ph	OH, OH
1307	-S-(C=NH)NH_2	1	$PhCH_2$	3-CN_4H-Ph	OH, OH
1308	-S-(C=NH)NH_2	1	$PhCH_2$	4-CN_4H-Ph	OH, OH
1309	-S-(C=NH)NH_2	1	$PhCH_2$	3-$(HOCH_2)$-Ph	OH, OH
1310	-S-(C=NH)NH_2	1	$PhCH_2$	4-$(HOCH_2)$-Ph	OH, OH
1311	-CN	1	$PhCH_2$	CH_2CN	OH, OH
1312	-NO_2	1	$PhCH_2$	CH_2CN	OH, OH
1313	-CH_2NO_2	1	$PhCH_2$	CH_2CN	OH, OH
1314	-CF_3	1	$PhCH_2$	CH_2CN	OH, OH
1315	-NH_2	1	$PhCH_2$	CH_2CN	OH, OH

1316	-NHOH	1	$PhCH_2$	CH_2CN	OH, OH
1317	-NHMe	1	$PhCH_2$	CH_2CN	OH, OH
1318	$-CH_2NHOH$	1	$PhCH_2$	CH_2CN	OH, OH
1319	$-CH_2NHOMe$	1	$PhCH_2$	CH_2CN	OH, OH
1320	$-NH(C{=}NH)CH_3$	1	$PhCH_2$	CH_2CN	OH, OH
1321	$-NH(C{=}NH)NHOH$	1	$PhCH_2$	CH_2CN	OH, OH
1322	$-NH(C{=}NH)NHNH_2$	1	$PhCH_2$	CH_2CN	OH, OH
1323	$-NH(C{=}NH)NHCN$	1	$PhCH_2$	CH_2CN	OH, OH
1324	$-NH(C{=}NH)NHCH_3$	1	$PhCH_2$	CH_2CN	OH, OH
1325	$-NH(C{=}NH)$ $NHCOCH_3$	1	$PhCH_2$	CH_2CN	OH, OH
1326	$-C(=NH)NH_2$	1	$PhCH_2$	CH_2CN	OH, OH
1327	$-C(=NH)NHMe$	1	$PhCH_2$	CH_2CN	OH, OH
1328	$-C(=NH)NHCOMe$	1	$PhCH_2$	CH_2CN	OH, OH
1329	$-CONH_2$	1	$PhCH_2$	CH_2CN	OH, OH
1330	$-CONHCH_3$	1	$PhCH_2$	CH_2CN	OH, OH
1331	$-CO_2CH_3$	1	$PhCH_2$	CH_2CN	OH, OH
1332	-OH	1	$PhCH_2$	CH_2CN	OH, OH
1333	$-CH_2OH$	1	$PhCH_2$	CH_2CN	OH, OH
1334	$-SCH_3$	1	$PhCH_2$	CH_2CN	OH, OH
1335	$-SOCH_3$	1	$PhCH_2$	CH_2CN	OH, OH
1336	$-SO_2CH_3$	1	$PhCH_2$	CH_2CN	OH, OH
1337	$-S-(C{=}NH)NHCH_3$	1	$PhCH_2$	CH_2CN	OH, OH
1338	$-S-(C{=}NH)$ $NHCOCH_3$	1	$PhCH_2$	CH_2CN	OH, OH
1339	CH_2NH_2	2	$PhCH_2$	H	(+)-pin
1340	CH_2NH_2	2	$PhCH_2$	H	OH, OH
1341	OMe	1	$PhCH_2$	H	(+)-pin
1342	OMe	1	$PhCH_2$	Methyl	(+)-pin
1343	OMe	1	$PhCH_2$	Ethyl	(+)-pin
1344	OMe	1	$PhCH_2$	n-Propyl	(+)-pin
1345	OMe	1	$PhCH_2$	n-Butyl	(+)-pin
1346	OMe	1	$PhCH_2$	CH_2SCH_3	(+)-pin
1347	OMe	1	$PhCH_2$	$CH_2(SO)CH_3$	(+)-pin
1348	OMe	1	$PhCH_2$	$CH_2(SO_2)CH_3$	(+)-pin
1349	OMe	1	$PhCH_2$	$CH_2CH_2SCH_3$	(+)-pin
1350	OMe	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin
1351	OMe	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin
1352	OMe	1	$PhCH_2$	CH_2CN	(+)-pin CR
1353	OMe	1	$PhCH_2$	CH_2CH_2CN	(+)-pin

1354	OMe	1	$PhCH_2$	$CH_2CH_2CH_2CN$	(+)-pin
1355	OMe	1	$PhCH_2$	CF_3	(+)-pin
1356	OMe	1	$PhCH_2$	CF_2CF_3	(+)-pin
1357	OMe	1	$PhCH_2$	$CF_2CF_2CF_3$	(+)-pin
1358	OMe	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin
1359	OMe	1	$PhCH_2$	F_5-Ph	(+)-pin
1360	OMe	1	$PhCH_2$	CH_2CO_2H	(+)-pin
1361	OMe	1	$PhCH_2$	$(CH_2)_2CO_2H$	(+)-pin
1362	OMe	1	$PhCH_2$	$(CH_2)_3CO_2H$	(+)-pin
1363	OMe	1	$PhCH_2$	CH_2CN_4H	(+)-pin
1364	OMe	1	$PhCH_2$	$(CH_2)_2CN_4H$	(+)-pin
1365	OMe	1	$PhCH_2$	$(CH_2)_3CN_4H$	(+)-pin
1366	OMe	1	$PhCH_2$	CH_2NO_2	(+)-pin
1367	OMe	1	$PhCH_2$	$(CH_2)_2NO_2$	(+)-pin
1368	OMe	1	$PhCH_2$	$(CH_2)_3NO_2$	(+)-pin
1369	OMe	1	$PhCH_2$	CH_2OH	(+)-pin
1370	OMe	1	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
1371	OMe	1	$PhCH_2$	$(CH_2)_3OH$	(+)-pin
1372	OMe	1	$PhCH_2$	CH_2CO_2Me	(+)-pin
1373	OMe	1	$PhCH_2$	$(CH_2)_2CO_2Me$	(+)-pin
1374	OMe	1	$PhCH_2$	$(CH_2)_3CO_2Me$	(+)-pin
1375	OMe	1	$PhCH_2$	Ph	(+)-pin
1376	OMe	1	$PhCH_2$	$PhCH_2$	(+)-pin
1377	OMe	1	$PhCH_2$	$Ph(CH_2)_2$	(+)-pin
1378	OMe	1	$PhCH_2$	3-NO_2-Ph	(+)-pin
1379	OMe	1	$PhCH_2$	4-NO_2-Ph	(+)-pin
1380	OMe	1	$PhCH_2$	3-CO_2H-Ph	(+)-pin
1381	OMe	1	$PhCH_2$	4-CO_2H-Ph	(+)-pin
1382	OMe	1	$PhCH_2$	3-CN_4H-Ph	(+)-pin
1383	OMe	1	$PhCH_2$	4-CN_4H-Ph	(+)-pin
1384	OMe	1	$PhCH_2$	3-$(HOCH_2)$-Ph	(+)-pin
1385	OMe	1	$PhCH_2$	4-$(HOCH_2)$-Ph	(+)-pin
1386	OMe	1	$PhCH_2$	H	OH, OH
1387	OMe	1	$PhCH_2$	Methyl	OH, OH
1388	OMe	1	$PhCH_2$	Ethyl	OH, OH
1389	OMe	1	$PhCH_2$	n-Propyl	OH, OH
1390	OMe	1	$PhCH_2$	n-Butyl	OH, OH
1391	OMe	1	$PhCH_2$	CH_2SCH_3	OH, OH
1392	OMe	1	$PhCH_2$	$CH_2(SO)CH_3$	OH, OH
1393	OMe	1	$PhCH_2$	$CH_2(SO_2)CH_3$	OH, OH

1394	OMe	1	$PhCH_2$	$CH_2CH_2SCH_3$	OH, OH	
1395	OMe	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	OH, OH	
1396	OMe	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH	
1397	OMe	1	$PhCH_2$	CH_2CN	OH, OH	
1398	OMe	1	$PhCH_2$	CH_2CH_2CN	OH, OH	
1399	OMe	1	$PhCH_2$	$CH_2CH_2CH_2CN$	OH, OH	
1400	OMe	1	$PhCH_2$	CF_3	OH, OH	
1401	OMe	1	$PhCH_2$	CF_2CF_3	OH, OH	
1402	OMe	1	$PhCH_2$	$CF_2CF_2CF_3$	OH, OH	
1403	OMe	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	OH, OH	
1404	OMe	1	$PhCH_2$	F_5-Ph	OH, OH	
1405	OMe	1	$PhCH_2$	CH_2CO_2H	OH, OH	
1406	OMe	1	$PhCH_2$	$(CH_2)_2CO_2H$	OH, OH	
1407	OMe	1	$PhCH_2$	$(CH_2)_3CO_2H$	OH, OH	
1408	OMe	1	$PhCH_2$	CH_2CN_4H	OH, OH	
1409	OMe	1	$PhCH_2$	$(CH_2)_2CN_4H$	OH, OH	
1410	OMe	1	$PhCH_2$	$(CH_2)_3CN_4H$	OH, OH	
1411	OMe	1	$PhCH_2$	CH_2NO_2	OH, OH	
1412	OMe	1	$PhCH_2$	$(CH_2)_2NO_2$	OH, OH	
1413	OMe	1	$PhCH_2$	$(CH_2)_3NO_2$	OH, OH	
1414	OMe	1	$PhCH_2$	CH_2OH	OH, OH	
1415	OMe	1	$PhCH_2$	$(CH_2)_2OH$	OH, OH	
1416	OMe	1	$PhCH_2$	$(CH_2)_3OH$	OH, OH	
1417	OMe	1	$PhCH_2$	CH_2CO_2Me	OH, OH	
1418	OMe	1	$PhCH_2$	$(CH_2)_2CO_2Me$	OH, OH	
1419	OMe	1	$PhCH_2$	$(CH_2)_3CO_2Me$	OH, OH	
1420	OMe	1	$PhCH_2$	Ph	OH, OH	
1421	OMe	1	$PhCH_2$	$PhCH_2$	OH, OH	
1422	OMe	1	$PhCH_2$	$Ph(CH_2)_2$	OH, OH	
1423	OMe	1	$PhCH_2$	3-NO_2-Ph	OH, OH	
1424	OMe	1	$PhCH_2$	4-NO_2-Ph	OH, OH	
1425	OMe	1	$PhCH_2$	3-CO_2H-Ph	OH, OH	
1426	OMe	1	$PhCH_2$	4-CO_2H-Ph	OH, OH	
1427	OMe	1	$PhCH_2$	3-CN_4H-Ph	OH, OH	
1428	OMe	1	$PhCH_2$	4-CN_4H-Ph	OH, OH	
1429	OMe	1	$PhCH_2$	3-$(HOCH_2)$-Ph	OH, OH	
1430	OMe	1	$PhCH_2$	4-$(HOCH_2)$-Ph	OH, OH	
1431	CH_2NH_2	1	$PhCH_2CH_2$	H	(+)-pin	AX
1432	CH_2NH_2	1	$PhCH_2CH_2$	Methyl	(+)-pin	
1433	CH_2NH_2	1	$PhCH_2CH_2$	Ethyl	(+)-pin	

1434	CH_2NH_2	1	$PhCH_2CH_2$	n-Propyl	(+)-pin	
1435	CH_2NH_2	1	$PhCH_2CH_2$	n-Butyl	(+)-pin	
1436	CH_2NH_2	1	$PhCH_2CH_2$	CH_2SCH_3	(+)-pin	
1437	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	(+)-pin	
1438	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	(+)-pin	
1439	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	(+)-pin	
1440	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin	
1441	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin	
1442	CH_2NH_2	1	$PhCH_2CH_2$	CH_2CN	(+)-pin	
1443	CH_2NH_2	1	$PhCH_2CH_2$	CH_2CH_2CN	(+)-pin	
1444	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	(+)-pin	
1445	CH_2NH_2	1	$PhCH_2CH_2$	CF_3	(+)-pin	
1446	CH_2NH_2	1	$PhCH_2CH_2$	CF_2CF_3	(+)-pin	
1447	CH_2NH_2	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	(+)-pin	
1448	CH_2NH_2	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin	
1449	CH_2NH_2	1	$PhCH_2CH_2$	F_5-Ph	(+)-pin	
1450	CH_2NH_2	1	$PhCH_2CH_2$	CH_2CO_2H	(+)-pin	
1451	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	(+)-pin	
1452	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	(+)-pin	
1453	CH_2NH_2	1	$PhCH_2CH_2$	CH_2CN_4H	(+)-pin	
1454	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	(+)-pin	
1455	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	(+)-pin	
1456	CH_2NH_2	1	$PhCH_2CH_2$	CH_2NO_2	(+)-pin	
1457	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	(+)-pin	
1458	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	(+)-pin	
1459	CH_2NH_2	1	$PhCH_2CH_2$	CH_2OH	(+)-pin	CS
1460	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_2OH$	(+)-pin	
1461	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3OH$	(+)-pin	
1462	CH_2NH_2	1	$PhCH_2CH_2$	CH_2CO_2Me	(+)-pin	
1463	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	(+)-pin	
1464	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	(+)-pin	
1465	CH_2NH_2	1	$PhCH_2CH_2$	Ph	(+)-pin	
1466	CH_2NH_2	1	$PhCH_2CH_2$	$PhCH_2$	(+)-pin	
1467	CH_2NH_2	1	$PhCH_2CH_2$	$Ph(CH_2)_2$	(+)-pin	AY
1468	CH_2NH_2	1	$PhCH_2CH_2$	3-NO_2-Ph	(+)-pin	
1469	CH_2NH_2	1	$PhCH_2CH_2$	4-NO_2-Ph	(+)-pin	
1470	CH_2NH_2	1	$PhCH_2CH_2$	3-CO_2H-Ph	(+)-pin	
1471	CH_2NH_2	1	$PhCH_2CH_2$	4-CO_2H-Ph	(+)-pin	
1472	CH_2NH_2	1	$PhCH_2CH_2$	3-CN_4H-Ph	(+)-pin	
1473	CH_2NH_2	1	$PhCH_2CH_2$	4-CN_4H-Ph	(+)-pin	

1474	CH_2NH_2	1	$PhCH_2CH_2$	3-($HOCH_2$)-Ph	(+)-pin
1475	CH_2NH_2	1	$PhCH_2CH_2$	4-($HOCH_2$)-Ph	(+)-pin
1476	NH(C=NH)NH_2	1	$PhCH_2CH_2$	H	(+)-pin
1477	NH(C=NH)NH_2	1	$PhCH_2CH_2$	Methyl	(+)-pin
1478	NH(C=NH)NH_2	1	$PhCH_2CH_2$	Ethyl	(+)-pin
1479	NH(C=NH)NH_2	1	$PhCH_2CH_2$	n-Propyl	(+)-pin
1480	NH(C=NH)NH_2	1	$PhCH_2CH_2$	n-Butyl	(+)-pin
1481	NH(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2SCH_3	(+)-pin
1482	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	(+)-pin
1483	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	(+)-pin
1484	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	(+)-pin
1485	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin
1486	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin
1487	NH(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2CN	(+)-pin
1488	NH(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2CH_2CN	(+)-pin
1489	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	(+)-pin
1490	NH(C=NH)NH_2	1	$PhCH_2CH_2$	CF_3	(+)-pin
1491	NH(C=NH)NH_2	1	$PhCH_2CH_2$	CF_2CF_3	(+)-pin
1492	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	(+)-pin
1493	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin
1494	NH(C=NH)NH_2	1	$PhCH_2CH_2$	F_5-Ph	(+)-pin
1495	NH(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2CO_2H	(+)-pin
1496	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	(+)-pin
1497	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	(+)-pin
1498	NH(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2CN_4H	(+)-pin
1499	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	(+)-pin
1500	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	(+)-pin
1501	NH(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2NO_2	(+)-pin
1502	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	(+)-pin
1503	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	(+)-pin
1504	NH(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2OH	(+)-pin
1505	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2OH$	(+)-pin
1506	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3OH$	(+)-pin
1507	NH(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2CO_2Me	(+)-pin
1508	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	(+)-pin
1509	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	(+)-pin
1510	NH(C=NH)NH_2	1	$PhCH_2CH_2$	Ph	(+)-pin
1511	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$PhCH_2$	(+)-pin
1512	NH(C=NH)NH_2	1	$PhCH_2CH_2$	$Ph(CH_2)_2$	(+)-pin
1513	NH(C=NH)NH_2	1	$PhCH_2CH_2$	3-NO_2-Ph	(+)-pin

1514	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	4-NO$_2$-Ph	(+)-pin	
1515	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	3-CO$_2$H-Ph	(+)-pin	
1516	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	4-CO$_2$H-Ph	(+)-pin	
1517	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	3-CN$_4$H-Ph	(+)-pin	
1518	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	4-CN$_4$H-Ph	(+)-pin	
1519	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	3-(HOCH$_2$)-Ph	(+)-pin	
1520	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	4-(HOCH$_2$)-Ph	(+)-pin	
1521	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	H	OH, OH	AZ
1522	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	Methyl	OH, OH	
1523	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	Ethyl	OH, OH	
1524	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	n-Propyl	OH, OH	
1525	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	n-Butyl	OH, OH	
1526	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$SCH$_3$	OH, OH	
1527	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$(SO)CH$_3$	OH, OH	
1528	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$(SO$_2$)CH$_3$	OH, OH	
1529	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CH$_2$SCH$_3$	OH, OH	
1530	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CH$_2$(SO)CH$_3$	OH, OH	
1531	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CH$_2$(SO)$_2$CH$_3$	OH, OH	
1532	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CN	OH, OH	
1533	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CH$_2$CN	OH, OH	
1534	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CH$_2$CH$_2$CN	OH, OH	
1535	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CF$_3$	OH, OH	
1536	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CF$_2$CF$_3$	OH, OH	
1537	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CF$_2$CF$_2$CF$_3$	OH, OH	
1538	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CF$_2$CF$_2$CF$_2$CF$_3$	OH, OH	
1539	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	F$_5$-Ph	OH, OH	
1540	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CO$_2$H	OH, OH	
1541	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_2$CO$_2$H	OH, OH	
1542	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_3$CO$_2$H	OH, OH	
1543	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CN$_4$H	OH, OH	
1544	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_2$CN$_4$H	OH, OH	
1545	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_3$CN$_4$H	OH, OH	
1546	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$NO$_2$	OH, OH	
1547	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_2$NO$_2$	OH, OH	
1548	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_3$NO$_2$	OH, OH	
1549	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$OH	OH, OH	
1550	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_2$OH	OH, OH	
1551	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_3$OH	OH, OH	
1552	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CO$_2$Me	OH, OH	
1553	CH$_2$NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_2$CO$_2$Me	OH, OH	

1554	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	OH, OH	
1555	CH_2NH_2	1	$PhCH_2CH_2$	Ph	OH, OH	
1556	CH_2NH_2	1	$PhCH_2CH_2$	$PhCH_2$	OH, OH	
1557	CH_2NH_2	1	$PhCH_2CH_2$	$Ph(CH_2)_2$	OH, OH	AJ
1558	CH_2NH_2	1	$PhCH_2CH_2$	$3-NO_2-Ph$	OH, OH	
1559	CH_2NH_2	1	$PhCH_2CH_2$	$4-NO_2-Ph$	OH, OH	
1560	CH_2NH_2	1	$PhCH_2CH_2$	$3-CO_2H-Ph$	OH, OH	
1561	CH_2NH_2	1	$PhCH_2CH_2$	$4-CO_2H-Ph$	OH, OH	
1562	CH_2NH_2	1	$PhCH_2CH_2$	$3-CN_4H-Ph$	OH, OH	
1563	CH_2NH_2	1	$PhCH_2CH_2$	$4-CN_4H-Ph$	OH, OH	
1564	CH_2NH_2	1	$PhCH_2CH_2$	$3-(HOCH_2)-Ph$	OH, OH	
1565	CH_2NH_2	1	$PhCH_2CH_2$	$4-(HOCH_2)-Ph$	OH, OH	
1566	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	H	OH, OH	
1567	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	Methyl	OH, OH	
1568	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	Ethyl	OH, OH	
1569	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	n-Propyl	OH, OH	
1570	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	n-Butyl	OH, OH	
1571	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	CH_2SCH_3	OH, OH	
1572	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	OH, OH	
1573	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	OH, OH	
1574	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	OH, OH	
1575	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	OH, OH	
1576	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH	
1577	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	CH_2CN	OH, OH	
1578	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	CH_2CH_2CN	OH, OH	
1579	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	OH, OH	
1580	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	CF_3	OH, OH	
1581	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	CF_2CF_3	OH, OH	
1582	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	OH, OH	
1583	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	OH, OH	
1584	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	F_5-Ph	OH, OH	
1585	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	CH_2CO_2H	OH, OH	
1586	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	OH, OH	
1587	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	OH, OH	
1588	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	CH_2CN_4H	OH, OH	
1589	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	OH, OH	
1590	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	OH, OH	
1591	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	CH_2NO_2	OH, OH	
1592	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	OH, OH	
1593	$NH(C=NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	OH, OH	

1594	NH(C=NH)NH2	1	PhCH2CH2	CH2OH	OH, OH
1595	NH(C=NH)NH2	1	PhCH2CH2	(CH2)2OH	OH, OH
1596	NH(C=NH)NH2	1	PhCH2CH2	(CH2)3OH	OH, OH
1597	NH(C=NH)NH2	1	PhCH2CH2	CH2CO2Me	OH, OH
1598	NH(C=NH)NH2	1	PhCH2CH2	(CH2)2CO2Me	OH, OH
1599	NH(C=NH)NH2	1	PhCH2CH2	(CH2)3CO2Me	OH, OH
1600	NH(C=NH)NH2	1	PhCH2CH2	Ph	OH, OH
1601	NH(C=NH)NH2	1	PhCH2CH2	PhCH2	OH, OH
1602	NH(C=NH)NH2	1	PhCH2CH2	Ph(CH2)2	OH, OH
1603	NH(C=NH)NH2	1	PhCH2CH2	3-NO2-Ph	OH, OH
1604	NH(C=NH)NH2	1	PhCH2CH2	4-NO2-Ph	OH, OH
1605	NH(C=NH)NH2	1	PhCH2CH2	3-CO2H-Ph	OH, OH
1606	NH(C=NH)NH2	1	PhCH2CH2	4-CO2H-Ph	OH, OH
1607	NH(C=NH)NH2	1	PhCH2CH2	3-CN4H-Ph	OH, OH
1608	NH(C=NH)NH2	1	PhCH2CH2	4-CN4H-Ph	OH, OH
1609	NH(C=NH)NH2	1	PhCH2CH2	3-(HOCH2)-Ph	OH, OH
1610	NH(C=NH)NH2	1	PhCH2CH2	4-(HOCH2)-Ph	OH, OH
1611	-S-(C=NH)NH2	1	PhCH2CH2	H	(+)-pin
1612	-S-(C=NH)NH2	1	PhCH2CH2	Methyl	(+)-pin
1613	-S-(C=NH)NH2	1	PhCH2CH2	Ethyl	(+)-pin
1614	-S-(C=NH)NH2	1	PhCH2CH2	n-Propyl	(+)-pin
1615	-S-(C=NH)NH2	1	PhCH2CH2	n-Butyl	(+)-pin
1616	-S-(C=NH)NH2	1	PhCH2CH2	CH2SCH3	(+)-pin
1617	-S-(C=NH)NH2	1	PhCH2CH2	CH2(SO)CH3	(+)-pin
1618	-S-(C=NH)NH2	1	PhCH2CH2	CH2(SO2)CH3	(+)-pin
1619	-S-(C=NH)NH2	1	PhCH2CH2	CH2CH2SCH3	(+)-pin
1620	-S-(C=NH)NH2	1	PhCH2CH2	CH2CH2(SO)CH3	(+)-pin
1621	-S-(C=NH)NH2	1	PhCH2CH2	CH2CH2(SO)2CH3	(+)-pin
1622	-S-(C=NH)NH2	1	PhCH2CH2	CH2CN	(+)-pin
1623	-S-(C=NH)NH2	1	PhCH2CH2	CH2CH2CN	(+)-pin
1624	-S-(C=NH)NH2	1	PhCH2CH2	CH2CH2CH2CN	(+)-pin
1625	-S-(C=NH)NH2	1	PhCH2CH2	CF3	(+)-pin
1626	-S-(C=NH)NH2	1	PhCH2CH2	CF2CF3	(+)-pin
1627	-S-(C=NH)NH2	1	PhCH2CH2	CF2CF2CF3	(+)-pin
1628	-S-(C=NH)NH2	1	PhCH2CH2	CF2CF2CF2CF3	(+)-pin
1629	-S-(C=NH)NH2	1	PhCH2CH2	F5-Ph	(+)-pin
1630	-S-(C=NH)NH2	1	PhCH2CH2	CH2CO2H	(+)-pin
1631	-S-(C=NH)NH2	1	PhCH2CH2	(CH2)2CO2H	(+)-pin
1632	-S-(C=NH)NH2	1	PhCH2CH2	(CH2)3CO2H	(+)-pin
1633	-S-(C=NH)NH2	1	PhCH2CH2	CH2CN4H	(+)-pin

1634	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	(+)-pin
1635	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	(+)-pin
1636	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2NO_2	(+)-pin
1637	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	(+)-pin
1638	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	(+)-pin
1639	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2OH	(+)-pin
1640	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2OH$	(+)-pin
1641	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3OH$	(+)-pin
1642	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2CO_2Me	(+)-pin
1643	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	(+)-pin
1644	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	(+)-pin
1645	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	Ph	(+)-pin
1646	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$PhCH_2$	(+)-pin
1647	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$Ph(CH_2)_2$	(+)-pin
1648	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	3-NO_2-Ph	(+)-pin
1649	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	4-NO_2-Ph	(+)-pin
1650	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	3-CO_2H-Ph	(+)-pin
1651	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	4-CO_2H-Ph	(+)-pin
1652	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	3-CN_4H-Ph	(+)-pin
1653	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	4-CN_4H-Ph	(+)-pin
1654	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	3-$(HOCH_2)$-Ph	(+)-pin
1655	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	4-$(HOCH_2)$-Ph	(+)-pin
1656	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	H	OH, OH
1657	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	Methyl	OH, OH
1658	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	Ethyl	OH, OH
1659	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	n-Propyl	OH, OH
1660	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	n-Butyl	OH, OH
1661	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2SCH_3	OH, OH
1662	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	OH, OH
1663	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	OH, OH
1664	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	OH, OH
1665	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	OH, OH
1666	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH
1667	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2CN	OH, OH
1668	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2CH_2CN	OH, OH
1669	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	OH, OH
1670	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CF_3	OH, OH
1671	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CF_2CF_3	OH, OH
1672	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	OH, OH
1673	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	OH, OH

1674	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	F_5-Ph	OH, OH
1675	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2CO_2H	OH, OH
1676	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	OH, OH
1677	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	OH, OH
1678	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2CN_4H	OH, OH
1679	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	OH, OH
1680	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	OH, OH
1681	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2NO_2	OH, OH
1682	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	OH, OH
1683	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	OH, OH
1684	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2OH	OH, OH
1685	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2OH$	OH, OH
1686	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3OH$	OH, OH
1687	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2CO_2Me	OH, OH
1688	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	OH, OH
1689	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	OH, OH
1690	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	Ph	OH, OH
1691	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$PhCH_2$	OH, OH
1692	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$Ph(CH_2)_2$	OH, OH
1693	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	3-NO_2-Ph	OH, OH
1694	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	4-NO_2-Ph	OH, OH
1695	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	3-CO_2H-Ph	OH, OH
1696	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	4-CO_2H-Ph	OH, OH
1697	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	3-CN_4H-Ph	OH, OH
1698	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	4-CN_4H-Ph	OH, OH
1699	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	3-$(HOCH_2)$-Ph	OH, OH
1700	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	4-$(HOCH_2)$-Ph	OH, OH
1701	OMe	1	$PhCH_2CH_2$	H	(+)-pin
1702	OMe	1	$PhCH_2CH_2$	Methyl	(+)-pin
1703	OMe	1	$PhCH_2CH_2$	Ethyl	(+)-pin
1704	OMe	1	$PhCH_2CH_2$	n-Propyl	(+)-pin
1705	OMe	1	$PhCH_2CH_2$	n-Butyl	(+)-pin
1706	OMe	1	$PhCH_2CH_2$	CH_2SCH_3	(+)-pin
1707	OMe	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	(+)-pin
1708	OMe	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	(+)-pin
1709	OMe	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	(+)-pin
1710	OMe	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin
1711	OMe	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin
1712	OMe	1	$PhCH_2CH_2$	CH_2CN	(+)-pin
1713	OMe	1	$PhCH_2CH_2$	CH_2CH_2CN	(+)-pin

1714	OMe	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	(+)-pin
1715	OMe	1	$PhCH_2CH_2$	CF_3	(+)-pin
1716	OMe	1	$PhCH_2CH_2$	CF_2CF_3	(+)-pin
1717	OMe	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	(+)-pin
1718	OMe	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin
1719	OMe	1	$PhCH_2CH_2$	F_5-Ph	(+)-pin
1720	OMe	1	$PhCH_2CH_2$	CH_2CO_2H	(+)-pin
1721	OMe	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	(+)-pin
1722	OMe	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	(+)-pin
1723	OMe	1	$PhCH_2CH_2$	CH_2CN_4H	(+)-pin
1724	OMe	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	(+)-pin
1725	OMe	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	(+)-pin
1726	OMe	1	$PhCH_2CH_2$	CH_2NO_2	(+)-pin
1727	OMe	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	(+)-pin
1728	OMe	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	(+)-pin
1729	OMe	1	$PhCH_2CH_2$	CH_2OH	(+)-pin
1730	OMe	1	$PhCH_2CH_2$	$(CH_2)_2OH$	(+)-pin
1731	OMe	1	$PhCH_2CH_2$	$(CH_2)_3OH$	(+)-pin
1732	OMe	1	$PhCH_2CH_2$	CH_2CO_2Me	(+)-pin
1733	OMe	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	(+)-pin
1734	OMe	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	(+)-pin
1735	OMe	1	$PhCH_2CH_2$	Ph	(+)-pin
1736	OMe	1	$PhCH_2CH_2$	$PhCH_2$	(+)-pin
1737	OMe	1	$PhCH_2CH_2$	$Ph(CH_2)_2$	(+)-pin
1738	OMe	1	$PhCH_2CH_2$	3-NO_2-Ph	(+)-pin
1739	OMe	1	$PhCH_2CH_2$	4-NO_2-Ph	(+)-pin
1740	OMe	1	$PhCH_2CH_2$	3-CO_2H-Ph	(+)-pin
1741	OMe	1	$PhCH_2CH_2$	4-CO_2H-Ph	(+)-pin
1742	OMe	1	$PhCH_2CH_2$	3-CN_4H-Ph	(+)-pin
1743	OMe	1	$PhCH_2CH_2$	4-CN_4H-Ph	(+)-pin
1744	OMe	1	$PhCH_2CH_2$	3-$(HOCH_2)$-Ph	(+)-pin
1745	OMe	1	$PhCH_2CH_2$	4-$(HOCH_2)$-Ph	(+)-pin
1746	OMe	1	$PhCH_2CH_2$	H	OH, OH
1747	OMe	1	$PhCH_2CH_2$	Methyl	OH, OH
1748	OMe	1	$PhCH_2CH_2$	Ethyl	OH, OH
1749	OMe	1	$PhCH_2CH_2$	n-Propyl	OH, OH
1750	OMe	1	$PhCH_2CH_2$	n-Butyl	OH, OH
1751	OMe	1	$PhCH_2CH_2$	CH_2SCH_3	OH, OH
1752	OMe	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	OH, OH
1753	OMe	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	OH, OH

1754	OMe	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	OH, OH
1755	OMe	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	OH, OH
1756	OMe	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH
1757	OMe	1	$PhCH_2CH_2$	CH_2CN	OH, OH
1758	OMe	1	$PhCH_2CH_2$	CH_2CH_2CN	OH, OH
1759	OMe	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	OH, OH
1760	OMe	1	$PhCH_2CH_2$	CF_3	OH, OH
1761	OMe	1	$PhCH_2CH_2$	CF_2CF_3	OH, OH
1762	OMe	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	OH, OH
1763	OMe	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	OH, OH
1764	OMe	1	$PhCH_2CH_2$	F_5-Ph	OH, OH
1765	OMe	1	$PhCH_2CH_2$	CH_2CO_2H	OH, OH
1766	OMe	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	OH, OH
1767	OMe	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	OH, OH
1768	OMe	1	$PhCH_2CH_2$	CH_2CN_4H	OH, OH
1769	OMe	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	OH, OH
1770	OMe	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	OH, OH
1771	OMe	1	$PhCH_2CH_2$	CH_2NO_2	OH, OH
1772	OMe	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	OH, OH
1773	OMe	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	OH, OH
1774	OMe	1	$PhCH_2CH_2$	CH_2OH	OH, OH
1775	OMe	1	$PhCH_2CH_2$	$(CH_2)_2OH$	OH, OH
1776	OMe	1	$PhCH_2CH_2$	$(CH_2)_3OH$	OH, OH
1777	OMe	1	$PhCH_2CH_2$	CH_2CO_2Me	OH, OH
1778	OMe	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	OH, OH
1779	OMe	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	OH, OH
1780	OMe	1	$PhCH_2CH_2$	Ph	OH, OH
1781	OMe	1	$PhCH_2CH_2$	$PhCH_2$	OH, OH
1782	OMe	1	$PhCH_2CH_2$	$Ph(CH_2)_2$	OH, OH
1783	OMe	1	$PhCH_2CH_2$	3-NO_2-Ph	OH, OH
1784	OMe	1	$PhCH_2CH_2$	4-NO_2-Ph	OH, OH
1785	OMe	1	$PhCH_2CH_2$	3-CO_2H-Ph	OH, OH
1786	OMe	1	$PhCH_2CH_2$	4-CO_2H-Ph	OH, OH
1787	OMe	1	$PhCH_2CH_2$	3-CN_4H-Ph	OH, OH
1788	OMe	1	$PhCH_2CH_2$	4-CN_4H-Ph	OH, OH
1789	OMe	1	$PhCH_2CH_2$	3-($HOCH_2$)-Ph	OH, OH
1790	OMe	1	$PhCH_2CH_2$	4-($HOCH_2$)-Ph	OH, OH
1791	NH(C=NH)H	1	Ph	H	(+)-pin
1792	NH(C=NH)H	1	Ph	Methyl	(+)-pin
1793	NH(C=NH)H	1	Ph	Ethyl	(+)-pin

1794	NH(C=NH)H	1	Ph	n-Propyl	(+)-pin
1795	NH(C=NH)H	1	Ph	n-Butyl	(+)-pin
1796	NH(C=NH)H	1	Ph	CH_2SCH_3	(+)-pin
1797	NH(C=NH)H	1	Ph	$CH_2(SO)CH_3$	(+)-pin
1798	NH(C=NH)H	1	Ph	$CH_2(SO_2)CH_3$	(+)-pin
1799	NH(C=NH)H	1	Ph	$CH_2CH_2SCH_3$	(+)-pin
1800	NH(C=NH)H	1	Ph	$CH_2CH_2(SO)CH_3$	(+)-pin
1801	NH(C=NH)H	1	Ph	$CH_2CH_2(SO)_2CH_3$	(+)-pin
1802	NH(C=NH)H	1	Ph	CH_2CN	(+)-pin
1803	NH(C=NH)H	1	Ph	CH_2CH_2CN	(+)-pin
1804	NH(C=NH)H	1	Ph	$CH_2CH_2CH_2CN$	(+)-pin
1805	NH(C=NH)H	1	Ph	CF_3	(+)-pin
1806	NH(C=NH)H	1	Ph	CF_2CF_3	(+)-pin
1807	NH(C=NH)H	1	Ph	$CF_2CF_2CF_3$	(+)-pin
1808	NH(C=NH)H	1	Ph	$CF_2CF_2CF_2CF_3$	(+)-pin
1809	NH(C=NH)H	1	Ph	F_5-Ph	(+)-pin
1810	NH(C=NH)H	1	Ph	CH_2CO_2H	(+)-pin
1811	NH(C=NH)H	1	Ph	$(CH_2)_2CO_2H$	(+)-pin
1812	NH(C=NH)H	1	Ph	$(CH_2)_3CO_2H$	(+)-pin
1813	NH(C=NH)H	1	Ph	CH_2CN_4H	(+)-pin
1814	NH(C=NH)H	1	Ph	$(CH_2)_2CN_4H$	(+)-pin
1815	NH(C=NH)H	1	Ph	$(CH_2)_3CN_4H$	(+)-pin
1816	NH(C=NH)H	1	Ph	CH_2NO_2	(+)-pin
1817	NH(C=NH)H	1	Ph	$(CH_2)_2NO_2$	(+)-pin
1818	NH(C=NH)H	1	Ph	$(CH_2)_3NO_2$	(+)-pin
1819	NH(C=NH)H	1	Ph	CH_2OH	(+)-pin
1820	NH(C=NH)H	1	Ph	$(CH_2)_2OH$	(+)-pin
1821	NH(C=NH)H	1	Ph	$(CH_2)_3OH$	(+)-pin
1822	NH(C=NH)H	1	Ph	CH_2CO_2Me	(+)-pin
1823	NH(C=NH)H	1	Ph	$(CH_2)_2CO_2Me$	(+)-pin
1824	NH(C=NH)H	1	Ph	$(CH_2)_3CO_2Me$	(+)-pin
1825	NH(C=NH)H	1	Ph	Ph	(+)-pin
1826	NH(C=NH)H	1	Ph	$PhCH_2$	(+)-pin
1827	NH(C=NH)H	1	Ph	$Ph(CH_2)_2$	(+)-pin
1828	NH(C=NH)H	1	Ph	3-NO_2-Ph	(+)-pin
1829	NH(C=NH)H	1	Ph	4-NO_2-Ph	(+)-pin
1830	NH(C=NH)H	1	Ph	3-CO_2H-Ph	(+)-pin
1831	NH(C=NH)H	1	Ph	4-CO_2H-Ph	(+)-pin
1832	NH(C=NH)H	1	Ph	3-CN_4H-Ph	(+)-pin
1833	NH(C=NH)H	1	Ph	4-CN_4H-Ph	(+)-pin

1834	NH(C=NH)H	1	Ph	3-($HOCH_2$)-Ph	(+)-pin
1835	NH(C=NH)H	1	Ph	4-($HOCH_2$)-Ph	(+)-pin
1836	NH(C=NH)H	1	Ph	H	OH, OH
1837	NH(C=NH)H	1	Ph	Methyl	OH, OH
1838	NH(C=NH)H	1	Ph	Ethyl	OH, OH
1839	NH(C=NH)H	1	Ph	n-Propyl	OH, OH
1840	NH(C=NH)H	1	Ph	n-Butyl	OH, OH
1841	NH(C=NH)H	1	Ph	CH_2SCH_3	OH, OH
1842	NH(C=NH)H	1	Ph	$CH_2(SO)CH_3$	OH, OH
1843	NH(C=NH)H	1	Ph	$CH_2(SO_2)CH_3$	OH, OH
1844	NH(C=NH)H	1	Ph	$CH_2CH_2SCH_3$	OH, OH
1845	NH(C=NH)H	1	Ph	$CH_2CH_2(SO)CH_3$	OH, OH
1846	NH(C=NH)H	1	Ph	$CH_2CH_2(SO)_2CH_3$	OH, OH
1847	NH(C=NH)H	1	Ph	CH_2CN	OH, OH
1848	NH(C=NH)H	1	Ph	CH_2CH_2CN	OH, OH
1849	NH(C=NH)H	1	Ph	$CH_2CH_2CH_2CN$	OH, OH
1850	NH(C=NH)H	1	Ph	CF_3	OH, OH
1851	NH(C=NH)H	1	Ph	CF_2CF_3	OH, OH
1852	NH(C=NH)H	1	Ph	$CF_2CF_2CF_3$	OH, OH
1853	NH(C=NH)H	1	Ph	$CF_2CF_2CF_2CF_3$	OH, OH
1854	NH(C=NH)H	1	Ph	F_5-Ph	OH, OH
1855	NH(C=NH)H	1	Ph	CH_2CO_2H	OH, OH
1856	NH(C=NH)H	1	Ph	$(CH_2)_2CO_2H$	OH, OH
1857	NH(C=NH)H	1	Ph	$(CH_2)_3CO_2H$	OH, OH
1858	NH(C=NH)H	1	Ph	CH_2CN_4H	OH, OH
1859	NH(C=NH)H	1	Ph	$(CH_2)_2CN_4H$	OH, OH
1860	NH(C=NH)H	1	Ph	$(CH_2)_3CN_4H$	OH, OH
1861	NH(C=NH)H	1	Ph	CH_2NO_2	OH, OH
1862	NH(C=NH)H	1	Ph	$(CH_2)_2NO_2$	OH, OH
1863	NH(C=NH)H	1	Ph	$(CH_2)_3NO_2$	OH, OH
1864	NH(C=NH)H	1	Ph	CH_2OH	OH, OH
1865	NH(C=NH)H	1	Ph	$(CH_2)_2OH$	OH, OH
1866	NH(C=NH)H	1	Ph	$(CH_2)_3OH$	OH, OH
1867	NH(C=NH)H	1	Ph	CH_2CO_2Me	OH, OH
1868	NH(C=NH)H	1	Ph	$(CH_2)_2CO_2Me$	OH, OH
1869	NH(C=NH)H	1	Ph	$(CH_2)_3CO_2Me$	OH, OH
1870	NH(C=NH)H	1	Ph	Ph	OH, OH
1871	NH(C=NH)H	1	Ph	$PhCH_2$	OH, OH
1872	NH(C=NH)H	1	Ph	$Ph(CH_2)_2$	OH, OH
1873	NH(C=NH)H	1	Ph	3-NO_2-Ph	OH, OH

1874	NH(C=NH)H	1	Ph	4-NO_2-Ph	OH, OH
1875	NH(C=NH)H	1	Ph	3-CO_2H-Ph	OH, OH
1876	NH(C=NH)H	1	Ph	4-CO_2H-Ph	OH, OH
1877	NH(C=NH)H	1	Ph	3-CN_4H-Ph	OH, OH
1878	NH(C=NH)H	1	Ph	4-CN_4H-Ph	OH, OH
1879	NH(C=NH)H	1	Ph	3-($HOCH_2$)-Ph	OH, OH
1880	NH(C=NH)H	1	Ph	4-($HOCH_2$)-Ph	OH, OH
1881	NH(C=NH)H	1	$PhCH_2$	H	(+)-pin
1882	NH(C=NH)H	1	$PhCH_2$	Methyl	(+)-pin
1883	NH(C=NH)H	1	$PhCH_2$	Ethyl	(+)-pin
1884	NH(C=NH)H	1	$PhCH_2$	n-Propyl	(+)-pin
1885	NH(C=NH)H	1	$PhCH_2$	n-Butyl	(+)-pin
1886	NH(C=NH)H	1	$PhCH_2$	CH_2SCH_3	(+)-pin
1887	NH(C=NH)H	1	$PhCH_2$	$CH_2(SO)CH_3$	(+)-pin
1888	NH(C=NH)H	1	$PhCH_2$	$CH_2(SO_2)CH_3$	(+)-pin
1889	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2SCH_3$	(+)-pin
1890	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin
1891	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin
1892	NH(C=NH)H	1	$PhCH_2$	CH_2CN	(+)-pin
1893	NH(C=NH)H	1	$PhCH_2$	CH_2CH_2CN	(+)-pin
1894	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2CH_2CN$	(+)-pin
1895	NH(C=NH)H	1	$PhCH_2$	CF_3	(+)-pin
1896	NH(C=NH)H	1	$PhCH_2$	CF_2CF_3	(+)-pin
1897	NH(C=NH)H	1	$PhCH_2$	$CF_2CF_2CF_3$	(+)-pin
1898	NH(C=NH)H	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin
1899	NH(C=NH)H	1	$PhCH_2$	F_5-Ph	(+)-pin
1900	NH(C=NH)H	1	$PhCH_2$	CH_2CO_2H	(+)-pin
1901	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2CO_2H$	(+)-pin
1902	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3CO_2H$	(+)-pin
1903	NH(C=NH)H	1	$PhCH_2$	CH_2CN_4H	(+)-pin
1904	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2CN_4H$	(+)-pin
1905	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3CN_4H$	(+)-pin
1906	NH(C=NH)H	1	$PhCH_2$	CH_2NO_2	(+)-pin
1907	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2NO_2$	(+)-pin
1908	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3NO_2$	(+)-pin
1909	NH(C=NH)H	1	$PhCH_2$	CH_2OH	(+)-pin
1910	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
1911	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3OH$	(+)-pin
1912	NH(C=NH)H	1	$PhCH_2$	CH_2CO_2Me	(+)-pin
1913	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2CO_2Me$	(+)-pin

1914	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3CO_2Me$	(+)-pin
1915	NH(C=NH)H	1	$PhCH_2$	Ph	(+)-pin
1916	NH(C=NH)H	1	$PhCH_2$	$PhCH_2$	(+)-pin
1917	NH(C=NH)H	1	$PhCH_2$	$Ph(CH_2)_2$	(+)-pin
1918	NH(C=NH)H	1	$PhCH_2$	$3\text{-}NO_2\text{-}Ph$	(+)-pin
1919	NH(C=NH)H	1	$PhCH_2$	$4\text{-}NO_2\text{-}Ph$	(+)-pin
1920	NH(C=NH)H	1	$PhCH_2$	$3\text{-}CO_2H\text{-}Ph$	(+)-pin
1921	NH(C=NH)H	1	$PhCH_2$	$4\text{-}CO_2H\text{-}Ph$	(+)-pin
1922	NH(C=NH)H	1	$PhCH_2$	$3\text{-}CN_4H\text{-}Ph$	(+)-pin
1923	NH(C=NH)H	1	$PhCH_2$	$4\text{-}CN_4H\text{-}Ph$	(+)-pin
1924	NH(C=NH)H	1	$PhCH_2$	$3\text{-}(HOCH_2)\text{-}Ph$	(+)-pin
1925	NH(C=NH)H	1	$PhCH_2$	$4\text{-}(HOCH_2)\text{-}Ph$	(+)-pin
1926	NH(C=NH)H	1	$PhCH_2$	H	OH, OH
1927	NH(C=NH)H	1	$PhCH_2$	Methyl	OH, OH
1928	NH(C=NH)H	1	$PhCH_2$	Ethyl	OH, OH
1929	NH(C=NH)H	1	$PhCH_2$	n-Propyl	OH, OH
1930	NH(C=NH)H	1	$PhCH_2$	n-Butyl	OH, OH
1931	NH(C=NH)H	1	$PhCH_2$	CH_2SCH_3	OH, OH
1932	NH(C=NH)H	1	$PhCH_2$	$CH_2(SO)CH_3$	OH, OH
1933	NH(C=NH)H	1	$PhCH_2$	$CH_2(SO_2)CH_3$	OH, OH
1934	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2SCH_3$	OH, OH
1935	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	OH, OH
1936	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH
1937	NH(C=NH)H	1	$PhCH_2$	CH_2CN	OH, OH
1938	NH(C=NH)H	1	$PhCH_2$	CH_2CH_2CN	OH, OH
1939	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2CH_2CN$	OH, OH
1940	NH(C=NH)H	1	$PhCH_2$	CF_3	OH, OH
1941	NH(C=NH)H	1	$PhCH_2$	CF_2CF_3	OH, OH
1942	NH(C=NH)H	1	$PhCH_2$	$CF_2CF_2CF_3$	OH, OH
1943	NH(C=NH)H	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	OH, OH
1944	NH(C=NH)H	1	$PhCH_2$	$F_5\text{-}Ph$	OH, OH
1945	NH(C=NH)H	1	$PhCH_2$	CH_2CO_2H	OH, OH
1946	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2CO_2H$	OH, OH
1947	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3CO_2H$	OH, OH
1948	NH(C=NH)H	1	$PhCH_2$	CH_2CN_4H	OH, OH
1949	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2CN_4H$	OH, OH
1950	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3CN_4H$	OH, OH
1951	NH(C=NH)H	1	$PhCH_2$	CH_2NO_2	OH, OH
1952	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2NO_2$	OH, OH
1953	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3NO_2$	OH, OH

1954	NH(C=NH)H	1	$PhCH_2$	CH_2OH	OH, OH
1955	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2OH$	OH, OH
1956	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3OH$	OH, OH
1957	NH(C=NH)H	1	$PhCH_2$	CH_2CO_2Me	OH, OH
1958	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2CO_2Me$	OH, OH
1959	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3CO_2Me$	OH, OH
1960	NH(C=NH)H	1	$PhCH_2$	Ph	OH, OH
1961	NH(C=NH)H	1	$PhCH_2$	$PhCH_2$	OH, OH
1962	NH(C=NH)H	1	$PhCH_2$	$Ph(CH_2)_2$	OH, OH
1963	NH(C=NH)H	1	$PhCH_2$	$3-NO_2-Ph$	OH, OH
1964	NH(C=NH)H	1	$PhCH_2$	$4-NO_2-Ph$	OH, OH
1965	NH(C=NH)H	1	$PhCH_2$	$3-CO_2H-Ph$	OH, OH
1966	NH(C=NH)H	1	$PhCH_2$	$4-CO_2H-Ph$	OH, OH
1967	NH(C=NH)H	1	$PhCH_2$	$3-CN_4H-Ph$	OH, OH
1968	NH(C=NH)H	1	$PhCH_2$	$4-CN_4H-Ph$	OH, OH
1969	NH(C=NH)H	1	$PhCH_2$	$3-(HOCH_2)-Ph$	OH, OH
1970	NH(C=NH)H	1	$PhCH_2$	$4-(HOCH_2)-Ph$	OH, OH
1971	NH(C=NH)H	1	$PhCH_2CH_2$	H	(+)-pin
1972	NH(C=NH)H	1	$PhCH_2CH_2$	Methyl	(+)-pin
1973	NH(C=NH)H	1	$PhCH_2CH_2$	Ethyl	(+)-pin
1974	NH(C=NH)H	1	$PhCH_2CH_2$	n-Propyl	(+)-pin
1975	NH(C=NH)H	1	$PhCH_2CH_2$	n-Butyl	(+)-pin
1976	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2SCH_3	(+)-pin
1977	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	(+)-pin
1978	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	(+)-pin
1979	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	(+)-pin
1980	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin
1981	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin
1982	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CN	(+)-pin
1983	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CH_2CN	(+)-pin
1984	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	(+)-pin
1985	NH(C=NH)H	1	$PhCH_2CH_2$	CF_3	(+)-pin
1986	NH(C=NH)H	1	$PhCH_2CH_2$	CF_2CF_3	(+)-pin
1987	NH(C=NH)H	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	(+)-pin
1988	NH(C=NH)H	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin
1989	NH(C=NH)H	1	$PhCH_2CH_2$	F_5-Ph	(+)-pin
1990	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CO_2H	(+)-pin
1991	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	(+)-pin
1992	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	(+)-pin
1993	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CN_4H	(+)-pin

1994	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	(+)-pin
1995	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	(+)-pin
1996	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2NO_2	(+)-pin
1997	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	(+)-pin
1998	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	(+)-pin
1999	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2OH	(+)-pin
2000	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2OH$	(+)-pin
2001	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3OH$	(+)-pin
2002	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CO_2Me	(+)-pin
2003	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	(+)-pin
2004	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	(+)-pin
2005	NH(C=NH)H	1	$PhCH_2CH_2$	Ph	(+)-pin
2006	NH(C=NH)H	1	$PhCH_2CH_2$	$PhCH_2$	(+)-pin
2007	NH(C=NH)H	1	$PhCH_2CH_2$	$Ph(CH_2)_2$	(+)-pin
2008	NH(C=NH)H	1	$PhCH_2CH_2$	3-NO_2-Ph	(+)-pin
2009	NH(C=NH)H	1	$PhCH_2CH_2$	4-NO_2-Ph	(+)-pin
2010	NH(C=NH)H	1	$PhCH_2CH_2$	3-CO_2H-Ph	(+)-pin
2011	NH(C=NH)H	1	$PhCH_2CH_2$	4-CO_2H-Ph	(+)-pin
2012	NH(C=NH)H	1	$PhCH_2CH_2$	3-CN_4H-Ph	(+)-pin
2013	NH(C=NH)H	1	$PhCH_2CH_2$	4-CN_4H-Ph	(+)-pin
2014	NH(C=NH)H	1	$PhCH_2CH_2$	3-$(HOCH_2)$-Ph	(+)-pin
2015	NH(C=NH)H	1	$PhCH_2CH_2$	4-$(HOCH_2)$-Ph	(+)-pin
2016	NH(C=NH)H	1	$PhCH_2CH_2$	H	OH, OH
2017	NH(C=NH)H	1	$PhCH_2CH_2$	Methyl	OH, OH
2018	NH(C=NH)H	1	$PhCH_2CH_2$	Ethyl	OH, OH
2019	NH(C=NH)H	1	$PhCH_2CH_2$	n-Propyl	OH, OH
2020	NH(C=NH)H	1	$PhCH_2CH_2$	n-Butyl	OH, OH
2021	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2SCH_3	OH, OH
2022	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	OH, OH
2023	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	OH, OH
2024	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	OH, OH
2025	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	OH, OH
2026	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH
2027	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CN	OH, OH
2028	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CH_2CN	OH, OH
2029	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	OH, OH
2030	NH(C=NH)H	1	$PhCH_2CH_2$	CF_3	OH, OH
2031	NH(C=NH)H	1	$PhCH_2CH_2$	CF_2CF_3	OH, OH
2032	NH(C=NH)H	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	OH, OH
2033	NH(C=NH)H	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	OH, OH

2034	NH(C=NH)H	1	$PhCH_2CH_2$	F_5-Ph	OH, OH	
2035	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CO_2H	OH, OH	
2036	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	OH, OH	
2037	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	OH, OH	
2038	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CN_4H	OH, OH	
2039	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	OH, OH	
2040	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	OH, OH	
2041	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2NO_2	OH, OH	
2042	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	OH, OH	
2043	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	OH, OH	
2044	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2OH	OH, OH	
2045	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2OH$	OH, OH	
2046	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3OH$	OH, OH	
2047	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CO_2Me	OH, OH	
2048	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	OH, OH	
2049	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	OH, OH	
2050	NH(C=NH)H	1	$PhCH_2CH_2$	Ph	OH, OH	
2051	NH(C=NH)H	1	$PhCH_2CH_2$	$PhCH_2$	OH, OH	
2052	NH(C=NH)H	1	$PhCH_2CH_2$	$Ph(CH_2)_2$	OH, OH	
2053	NH(C=NH)H	1	$PhCH_2CH_2$	3-NO_2-Ph	OH, OH	
2054	NH(C=NH)H	1	$PhCH_2CH_2$	4-NO_2-Ph	OH, OH	
2055	NH(C=NH)H	1	$PhCH_2CH_2$	3-CO_2H-Ph	OH, OH	
2056	NH(C=NH)H	1	$PhCH_2CH_2$	4-CO_2H-Ph	OH, OH	
2057	NH(C=NH)H	1	$PhCH_2CH_2$	3-CN_4H-Ph	OH, OH	
2058	NH(C=NH)H	1	$PhCH_2CH_2$	4-CN_4H-Ph	OH, OH	
2059	NH(C=NH)H	1	$PhCH_2CH_2$	3-($HOCH_2$)-Ph	OH, OH	
2060	NH(C=NH)H	1	$PhCH_2CH_2$	4-($HOCH_2$)-Ph	OH, OH	
2061	CH_2NH_2	1	$PhCH_2$	3-NO_2-Ph	(+)_pin	CU
2062	NH(C=NH)NH_2	1	Ph	$PhCH_2$	(+)-pin	
2063	NH(C=NH)NH_2	1	Ph	$PhCH_2CH_2$	(+)-pin	
2064	-S-(C=NH)NH_2	1	Ph	$PhCH_2$	(+)-pin	
2065	-S-(C=NH)NH_2	1	Ph	$PhCH_2CH_2$	(+)-pin	
2066	CH_2NH_2	1	$PhCH_2$	CH_2CN	(+)-pin	CN
2067	CH_2NH_2	1	$PhCH_2$	CH_2CN_4H	(+)-pin	CO
2068	CH_2NH_2	1	$PhCH_2CH_2$	CH_2OCH_2Ph	(+)-pin	CT

AG. Anal. calcd. for $C_{32}H_{42}BN_5O_3 \cdot 0.7\ H_2O \cdot 1.7\ HCl$: C, 61.00; H, 7.21; Cl, 9.56 N, 11.11. Found: C, 60.93; H, 7.20; Cl, 9.57 N, 11.55.

AH. Anal. calcd. for $C_{22}H_{28}BN_5O_3 \cdot 12H_2O \cdot 2.6HCl$: C, 36.09; Cl., 12.59; N, 9.56. Found: C, 36.25; Cl, 12.52; N, 9.32.

AI. Anal. calcd. for $C_{16}H_{24}BN_5O_3 \cdot 1.5\ H_2O \cdot 1.8\ HCl$: C, 43.89; H, 6.63; Cl, 14.57; N, 16.06. Found: C, 44.01; H, 6.28; Cl, 14.21; N, 15.59.

AJ. Anal. calcd. for $C_{25}H_{34}BN_5O_3 \cdot 2\ H_2O \cdot 1.6\ HCl$: C, 53.84; H, 7.16; Cl, 10.17; N, 12.56. Found: C, 53.71; H, 7.13; Cl, 10.25; N, 12.60.

AK. MS $(M+H)^+$: Calc. 480, Found 480.

AL. MS $(M+H)^+$: Calc. 494, Found 494.

AM. MS $(M+H)^+$: Calc. 522, Found 522.

AN MS $(M+H)^+$: Calc. 540, Found 540.

AO. MS $(M+H)^+$: Calc. 510, Found 510.

AP. MS $(M+H)^+$: Calc. 600, Found 600.

AQ. MS $(M+H)^+$: Calc. 556, Found 556.

AR. MS $(M+H)^+$: Calc. 570, Found 570.

AS. MS $(M+H)^+$: Calc. 601, Found 601.

AT. MS $(M+H)^+$: Calc. 598, Found 598.

AU. MS $(M+H)^+$: Calc. 629, Found 629.

AV. MS $(M+H)^+$: Calc. 422, Found 422.

AW. MS $(M+H)^+$: Calc. 538, Found 538.

AX. MS $(M+H)^+$: Calc. 494, Found 494.

AY. MS $(M+H)^+$: Calc. 598, Found 598.

AZ. MS $(M+H)^+$: Calc. 360, Found 360.

CN. MS $(M+H)^+$: Calc. 519, Found 519.

CO. MS $(M+H)^+$: Calc. 562, Found 562.

CP. MS $(M+H)^+$: Calc. 552, Found 552.

CQ. MS $(M+H)^+$: Calc. 571, Found 571.

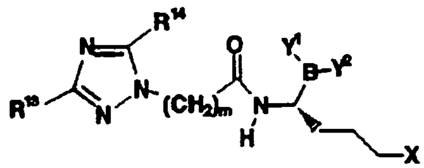
CR. MS $(M+H)^+$: Calc. 520, Found 520.

CS. MS $(M+H)^+$: Calc. 524, Found 524.

CT. MS $(M+H)^+$: Calc. 614, Found 614.

CU. MS $(M+H)^+$: Calc. 571, Found 571.

Table 15



Ex	X	m	R^{13}	R^{14}	Y^1Y^2	Phys. Data
2073	CH_2NH_2	1	Ph	H	(+)-pin	BW
2074	CH_2NH_2	1	Ph	Methyl	(+)-pin	BX
2075	CH_2NH_2	1	Ph	Ethyl	(+)-pin	
2076	CH_2NH_2	1	Ph	n-Propyl	(+)-pin	
2077	CH_2NH_2	1	Ph	n-Butyl	(+)-pin	
2078	CH_2NH_2	1	Ph	CH_2SCH_3	(+)-pin	
2079	CH_2NH_2	1	Ph	$CH_2(SO)CH_3$	(+)-pin	
2080	CH_2NH_2	1	Ph	$CH_2(SO_2)CH_3$	(+)-pin	
2081	CH_2NH_2	1	Ph	$CH_2CH_2SCH_3$	(+)-pin	
2082	CH_2NH_2	1	Ph	$CH_2CH_2(SO)CH_3$	(+)-pin	
2083	CH_2NH_2	1	Ph	$CH_2CH_2(SO)_2CH_3$	(+)-pin	
2084	CH_2NH_2	1	Ph	CH_2CN	(+)-pin	
2085	CH_2NH_2	1	Ph	CH_2CH_2CN	(+)-pin	
2086	CH_2NH_2	1	Ph	$CH_2CH_2CH_2CN$	(+)-pin	
2087	CH_2NH_2	1	Ph	CF_3	(+)-pin	
2088	CH_2NH_2	1	Ph	CF_2CF_3	(+)-pin	
2089	CH_2NH_2	1	Ph	$CF_2CF_2CF_3$	(+)-pin	
2090	CH_2NH_2	1	Ph	$CF_2CF_2CF_2CF_3$	(+)-pin	
2091	CH_2NH_2	1	Ph	F_5-Ph	(+)-pin	
2092	CH_2NH_2	1	Ph	CH_2CO_2H	(+)-pin	
2093	CH_2NH_2	1	Ph	$(CH_2)_2CO_2H$	(+)-pin	
2094	CH_2NH_2	1	Ph	$(CH_2)_3CO_2H$	(+)-pin	
2095	CH_2NH_2	1	Ph	CH_2CN_4H	(+)-pin	
2096	CH_2NH_2	1	Ph	$(CH_2)_2CN_4H$	(+)-pin	
2097	CH_2NH_2	1	Ph	$(CH_2)_3CN_4H$	(+)-pin	
2098	CH_2NH_2	1	Ph	CH_2NO_2	(+)-pin	
2099	CH_2NH_2	1	Ph	$(CH_2)_2NO_2$	(+)-pin	
2100	CH_2NH_2	1	Ph	$(CH_2)_3NO_2$	(+)-pin	
2101	CH_2NH_2	1	Ph	CH_2OH	(+)-pin	
2102	CH_2NH_2	1	Ph	$(CH_2)_2OH$	(+)-pin	
2103	CH_2NH_2	1	Ph	$(CH_2)_3OH$	(+)-pin	
2104	CH_2NH_2	1	Ph	CH_2CO_2Me	(+)-pin	

2105	CH_2NH_2	1	Ph	$(CH_2)_2CO_2Me$	(+)-pin
2106	CH_2NH_2	1	Ph	$(CH_2)_3CO_2Me$	(+)-pin
2107	CH_2NH_2	1	Ph	3-NO_2-Ph	(+)-pin
2108	CH_2NH_2	1	Ph	4-NO_2-Ph	(+)-pin
2109	CH_2NH_2	1	Ph	3-CO_2H-Ph	(+)-pin
2110	CH_2NH_2	1	Ph	4-CO_2H-Ph	(+)-pin
2111	CH_2NH_2	1	Ph	3-CN_4H-Ph	(+)-pin
2112	CH_2NH_2	1	Ph	4-CN_4H-Ph	(+)-pin
2113	CH_2NH_2	1	Ph	3-($HOCH_2$)-Ph	(+)-pin
2114	CH_2NH_2	1	Ph	4-($HOCH_2$)-Ph	(+)-pin
2115	$NH(C{=}NH)NH_2$	1	Ph	H	(+)-pin
2116	$NH(C{=}NH)NH_2$	1	Ph	Methyl	(+)-pin
2117	$NH(C{=}NH)NH_2$	1	Ph	Ethyl	(+)-pin
2118	$NH(C{=}NH)NH_2$	1	Ph	n-Propyl	(+)-pin
2119	$NH(C{=}NH)NH_2$	1	Ph	n-Butyl	(+)-pin
2120	$NH(C{=}NH)NH_2$	1	Ph	CH_2SCH_3	(+)-pin
2121	$NH(C{=}NH)NH_2$	1	Ph	$CH_2(SO)CH_3$	(+)-pin
2122	$NH(C{=}NH)NH_2$	1	Ph	$CH_2(SO_2)CH_3$	(+)-pin
2123	$NH(C{=}NH)NH_2$	1	Ph	$CH_2CH_2SCH_3$	(+)-pin
2124	$NH(C{=}NH)NH_2$	1	Ph	$CH_2CH_2(SO)CH_3$	(+)-pin
2125	$NH(C{=}NH)NH_2$	1	Ph	$CH_2CH_2(SO)_2CH_3$	(+)-pin
2126	$NH(C{=}NH)NH_2$	1	Ph	CH_2CN	(+)-pin
2127	$NH(C{=}NH)NH_2$	1	Ph	CH_2CH_2CN	(+)-pin
2128	$NH(C{=}NH)NH_2$	1	Ph	$CH_2CH_2CH_2CN$	(+)-pin
2129	$NH(C{=}NH)NH_2$	1	Ph	CF_3	(+)-pin
2130	$NH(C{=}NH)NH_2$	1	Ph	CF_2CF_3	(+)-pin
2131	$NH(C{=}NH)NH_2$	1	Ph	$CF_2CF_2CF_3$	(+)-pin
2132	$NH(C{=}NH)NH_2$	1	Ph	$CF_2CF_2CF_2CF_3$	(+)-pin
2133	$NH(C{=}NH)NH_2$	1	Ph	F_5-Ph	(+)-pin
2134	$NH(C{=}NH)NH_2$	1	Ph	CH_2CO_2H	(+)-pin
2135	$NH(C{=}NH)NH_2$	1	Ph	$(CH_2)_2CO_2H$	(+)-pin
2136	$NH(C{=}NH)NH_2$	1	Ph	$(CH_2)_3CO_2H$	(+)-pin
2137	$NH(C{=}NH)NH_2$	1	Ph	CH_2CN_4H	(+)-pin
2138	$NH(C{=}NH)NH_2$	1	Ph	$(CH_2)_2CN_4H$	(+)-pin
2139	$NH(C{=}NH)NH_2$	1	Ph	$(CH_2)_3CN_4H$	(+)-pin
2140	$NH(C{=}NH)NH_2$	1	Ph	CH_2NO_2	(+)-pin
2141	$NH(C{=}NH)NH_2$	1	Ph	$(CH_2)_2NO_2$	(+)-pin
2142	$NH(C{=}NH)NH_2$	1	Ph	$(CH_2)_3NO_2$	(+)-pin
2143	$NH(C{=}NH)NH_2$	1	Ph	CH_2OH	(+)-pin
2144	$NH(C{=}NH)NH_2$	1	Ph	$(CH_2)_2OH$	(+)-pin

2145	NH(C=NH)NH$_2$	1	Ph	(CH$_2$)$_3$OH	(+)-pin
2146	NH(C=NH)NH$_2$	1	Ph	CH$_2$CO$_2$Me	(+)-pin
2147	NH(C=NH)NH$_2$	1	Ph	(CH$_2$)$_2$CO$_2$Me	(+)-pin
2148	NH(C=NH)NH$_2$	1	Ph	(CH$_2$)$_3$CO$_2$Me	(+)-pin
2149	NH(C=NH)NH$_2$	1	Ph	3-NO$_2$-Ph	(+)-pin
2150	NH(C=NH)NH$_2$	1	Ph	4-NO$_2$-Ph	(+)-pin
2151	NH(C=NH)NH$_2$	1	Ph	3-CO$_2$H-Ph	(+)-pin
2152	NH(C=NH)NH$_2$	1	Ph	4-CO$_2$H-Ph	(+)-pin
2153	NH(C=NH)NH$_2$	1	Ph	3-CN$_4$H-Ph	(+)-pin
2154	NH(C=NH)NH$_2$	1	Ph	4-CN$_4$H-Ph	(+)-pin
2155	NH(C=NH)NH$_2$	1	Ph	3-(HOCH$_2$)-Ph	(+)-pin
2156	NH(C=NH)NH$_2$	1	Ph	4-(HOCH$_2$)-Ph	(+)-pin
2157	CH$_2$NH$_2$	1	Ph	H	OH, OH
2158	CH$_2$NH$_2$	1	Ph	Methyl	OH, OH
2159	CH$_2$NH$_2$	1	Ph	Ethyl	OH, OH
2160	CH$_2$NH$_2$	1	Ph	n-Propyl	OH, OH
2161	CH$_2$NH$_2$	1	Ph	n-Butyl	OH, OH
2162	CH$_2$NH$_2$	1	Ph	CH$_2$SCH$_3$	OH, OH
2163	CH$_2$NH$_2$	1	Ph	CH$_2$(SO)CH$_3$	OH, OH
2164	CH$_2$NH$_2$	1	Ph	CH$_2$(SO$_2$)CH$_3$	OH, OH
2165	CH$_2$NH$_2$	1	Ph	CH$_2$CH$_2$SCH$_3$	OH, OH
2166	CH$_2$NH$_2$	1	Ph	CH$_2$CH$_2$(SO)CH$_3$	OH, OH
2167	CH$_2$NH$_2$	1	Ph	CH$_2$CH$_2$(SO)$_2$CH$_3$	OH, OH
2168	CH$_2$NH$_2$	1	Ph	CH$_2$CN	OH, OH
2169	CH$_2$NH$_2$	1	Ph	CH$_2$CH$_2$CN	OH, OH
2170	CH$_2$NH$_2$	1	Ph	CH$_2$CH$_2$CH$_2$CN	OH, OH
2171	CH$_2$NH$_2$	1	Ph	CF$_3$	OH, OH
2172	CH$_2$NH$_2$	1	Ph	CF$_2$CF$_3$	OH, OH
2173	CH$_2$NH$_2$	1	Ph	CF$_2$CF$_2$CF$_3$	OH, OH
2174	CH$_2$NH$_2$	1	Ph	CF$_2$CF$_2$CF$_2$CF$_3$	OH, OH
2175	CH$_2$NH$_2$	1	Ph	F$_5$-Ph	OH, OH
2176	CH$_2$NH$_2$	1	Ph	CH$_2$CO$_2$H	OH, OH
2177	CH$_2$NH$_2$	1	Ph	(CH$_2$)$_2$CO$_2$H	OH, OH
2178	CH$_2$NH$_2$	1	Ph	(CH$_2$)$_3$CO$_2$H	OH, OH
2179	CH$_2$NH$_2$	1	Ph	CH$_2$CN$_4$H	OH, OH
2180	CH$_2$NH$_2$	1	Ph	(CH$_2$)$_2$CN$_4$H	OH, OH
2181	CH$_2$NH$_2$	1	Ph	(CH$_2$)$_3$CN$_4$H	OH, OH
2182	CH$_2$NH$_2$	1	Ph	CH$_2$NO$_2$	OH, OH
2183	CH$_2$NH$_2$	1	Ph	(CH$_2$)$_2$NO$_2$	OH, OH
2184	CH$_2$NH$_2$	1	Ph	(CH$_2$)$_3$NO$_2$	OH, OH

2185	CH_2NH_2	1	Ph	CH_2OH	OH, OH
2186	CH_2NH_2	1	Ph	$(CH_2)_2OH$	OH, OH
2187	CH_2NH_2	1	Ph	$(CH_2)_3OH$	OH, OH
2188	CH_2NH_2	1	Ph	CH_2CO_2Me	OH, OH
2189	CH_2NH_2	1	Ph	$(CH_2)_2CO_2Me$	OH, OH
2190	CH_2NH_2	1	Ph	$(CH_2)_3CO_2Me$	OH, OH
2191	CH_2NH_2	1	Ph	3-NO_2-Ph	OH, OH
2192	CH_2NH_2	1	Ph	4-NO_2-Ph	OH, OH
2193	CH_2NH_2	1	Ph	3-CO_2H-Ph	OH, OH
2194	CH_2NH_2	1	Ph	4-CO_2H-Ph	OH, OH
2195	CH_2NH_2	1	Ph	3-CN_4H-Ph	OH, OH
2196	CH_2NH_2	1	Ph	4-CN_4H-Ph	OH, OH
2197	CH_2NH_2	1	Ph	3-$(HOCH_2)$-Ph	OH, OH
2198	CH_2NH_2	1	Ph	4-$(HOCH_2)$-Ph	OH, OH
2199	NH(C=NH)NH_2	1	Ph	H	OH, OH
2200	NH(C=NH)NH_2	1	Ph	Methyl	OH, OH
2201	NH(C=NH)NH_2	1	Ph	Ethyl	OH, OH
2202	NH(C=NH)NH_2	1	Ph	n-Propyl	OH, OH
2203	NH(C=NH)NH_2	1	Ph	n-Butyl	OH, OH
2204	NH(C=NH)NH_2	1	Ph	CH_2SCH_3	OH, OH
2205	NH(C=NH)NH_2	1	Ph	$CH_2(SO)CH_3$	OH, OH
2206	NH(C=NH)NH_2	1	Ph	$CH_2(SO_2)CH_3$	OH, OH
2207	NH(C=NH)NH_2	1	Ph	$CH_2CH_2SCH_3$	OH, OH
2208	NH(C=NH)NH_2	1	Ph	$CH_2CH_2(SO)CH_3$	OH, OH
2209	NH(C=NH)NH_2	1	Ph	$CH_2CH_2(SO)_2CH_3$	OH, OH
2210	NH(C=NH)NH_2	1	Ph	CH_2CN	OH, OH
2211	NH(C=NH)NH_2	1	Ph	CH_2CH_2CN	OH, OH
2212	NH(C=NH)NH_2	1	Ph	$CH_2CH_2CH_2CN$	OH, OH
2213	NH(C=NH)NH_2	1	Ph	CF_3	OH, OH
2214	NH(C=NH)NH_2	1	Ph	CF_2CF_3	OH, OH
2215	NH(C=NH)NH_2	1	Ph	$CF_2CF_2CF_3$	OH, OH
2216	NH(C=NH)NH_2	1	Ph	$CF_2CF_2CF_2CF_3$	OH, OH
2217	NH(C=NH)NH_2	1	Ph	F_5-Ph	OH, OH
2218	NH(C=NH)NH_2	1	Ph	CH_2CO_2H	OH, OH
2219	NH(C=NH)NH_2	1	Ph	$(CH_2)_2CO_2H$	OH, OH
2220	NH(C=NH)NH_2	1	Ph	$(CH_2)_3CO_2H$	OH, OH
2221	NH(C=NH)NH_2	1	Ph	CH_2CN_4H	OH, OH
2222	NH(C=NH)NH_2	1	Ph	$(CH_2)_2CN_4H$	OH, OH
2223	NH(C=NH)NH_2	1	Ph	$(CH_2)_3CN_4H$	OH, OH
2224	NH(C=NH)NH_2	1	Ph	CH_2NO_2	OH, OH

2225	$NH(C=NH)NH_2$	1	Ph	$(CH_2)_2NO_2$	OH, OH
2226	$NH(C=NH)NH_2$	1	Ph	$(CH_2)_3NO_2$	OH, OH
2227	$NH(C=NH)NH_2$	1	Ph	CH_2OH	OH, OH
2228	$NH(C=NH)NH_2$	1	Ph	$(CH_2)_2OH$	OH, OH
2229	$NH(C=NH)NH_2$	1	Ph	$(CH_2)_3OH$	OH, OH
2230	$NH(C=NH)NH_2$	1	Ph	CH_2CO_2Me	OH, OH
2231	$NH(C=NH)NH_2$	1	Ph	$(CH_2)_2CO_2Me$	OH, OH
2232	$NH(C=NH)NH_2$	1	Ph	$(CH_2)_3CO_2Me$	OH, OH
2233	$NH(C=NH)NH_2$	1	Ph	$3-NO_2-Ph$	OH, OH
2234	$NH(C=NH)NH_2$	1	Ph	$4-NO_2-Ph$	OH, OH
2235	$NH(C=NH)NH_2$	1	Ph	$3-CO_2H-Ph$	OH, OH
2236	$NH(C=NH)NH_2$	1	Ph	$4-CO_2H-Ph$	OH, OH
2237	$NH(C=NH)NH_2$	1	Ph	$3-CN_4H-Ph$	OH, OH
2238	$NH(C=NH)NH_2$	1	Ph	$4-CN_4H-Ph$	OH, OH
2239	$NH(C=NH)NH_2$	1	Ph	$3-(HOCH_2)-Ph$	OH, OH
2240	$NH(C=NH)NH_2$	1	Ph	$4-(HOCH_2)-Ph$	OH, OH
2241	$-S-(C=NH)NH_2$	1	Ph	H	(+)-pin
2242	$-S-(C=NH)NH_2$	1	Ph	Methyl	(+)-pin
2243	$-S-(C=NH)NH_2$	1	Ph	Ethyl	(+)-pin
2244	$-S-(C=NH)NH_2$	1	Ph	n-Propyl	(+)-pin
2245	$-S-(C=NH)NH_2$	1	Ph	n-Butyl	(+)-pin
2246	$-S-(C=NH)NH_2$	1	Ph	CH_2SCH_3	(+)-pin
2247	$-S-(C=NH)NH_2$	1	Ph	$CH_2(SO)CH_3$	(+)-pin
2248	$-S-(C=NH)NH_2$	1	Ph	$CH_2(SO_2)CH_3$	(+)-pin
2249	$-S-(C=NH)NH_2$	1	Ph	$CH_2CH_2SCH_3$	(+)-pin
2250	$-S-(C=NH)NH_2$	1	Ph	$CH_2CH_2(SO)CH_3$	(+)-pin
2251	$-S-(C=NH)NH_2$	1	Ph	$CH_2CH_2(SO)_2CH_3$	(+)-pin
2252	$-S-(C=NH)NH_2$	1	Ph	CH_2CN	(+)-pin
2253	$-S-(C=NH)NH_2$	1	Ph	CH_2CH_2CN	(+)-pin
2254	$-S-(C=NH)NH_2$	1	Ph	$CH_2CH_2CH_2CN$	(+)-pin
2255	$-S-(C=NH)NH_2$	1	Ph	CF_3	(+)-pin
2256	$-S-(C=NH)NH_2$	1	Ph	CF_2CF_3	(+)-pin
2257	$-S-(C=NH)NH_2$	1	Ph	$CF_2CF_2CF_3$	(+)-pin
2258	$-S-(C=NH)NH_2$	1	Ph	$CF_2CF_2CF_2CF_3$	(+)-pin
2259	$-S-(C=NH)NH_2$	1	Ph	F_5-Ph	(+)-pin
2260	$-S-(C=NH)NH_2$	1	Ph	CH_2CO_2H	(+)-pin
2261	$-S-(C=NH)NH_2$	1	Ph	$(CH_2)_2CO_2H$	(+)-pin
2262	$-S-(C=NH)NH_2$	1	Ph	$(CH_2)_3CO_2H$	(+)-pin
2263	$-S-(C=NH)NH_2$	1	Ph	CH_2CN_4H	(+)-pin
2264	$-S-(C=NH)NH_2$	1	Ph	$(CH_2)_2CN_4H$	(+)-pin

2265	-S-(C=NH)NH_2	1	Ph	$(CH_2)_3CN_4H$	(+)-pin
2266	-S-(C=NH)NH_2	1	Ph	CH_2NO_2	(+)-pin
2267	-S-(C=NH)NH_2	1	Ph	$(CH_2)_2NO_2$	(+)-pin
2268	-S-(C=NH)NH_2	1	Ph	$(CH_2)_3NO_2$	(+)-pin
2269	-S-(C=NH)NH_2	1	Ph	CH_2OH	(+)-pin
2270	-S-(C=NH)NH_2	1	Ph	$(CH_2)_2OH$	(+)-pin
2271	-S-(C=NH)NH_2	1	Ph	$(CH_2)_3OH$	(+)-pin
2272	-S-(C=NH)NH_2	1	Ph	CH_2CO_2Me	(+)-pin
2273	-S-(C=NH)NH_2	1	Ph	$(CH_2)_2CO_2Me$	(+)-pin
2274	-S-(C=NH)NH_2	1	Ph	$(CH_2)_3CO_2Me$	(+)-pin
2275	-S-(C=NH)NH_2	1	Ph	3-NO_2-Ph	(+)-pin
2276	-S-(C=NH)NH_2	1	Ph	4-NO_2-Ph	(+)-pin
2277	-S-(C=NH)NH_2	1	Ph	3-CO_2H-Ph	(+)-pin
2278	-S-(C=NH)NH_2	1	Ph	4-CO_2H-Ph	(+)-pin
2279	-S-(C=NH)NH_2	1	Ph	3-CN_4H-Ph	(+)-pin
2280	-S-(C=NH)NH_2	1	Ph	4-CN_4H-Ph	(+)-pin
2281	-S-(C=NH)NH_2	1	Ph	3-$(HOCH_2)$-Ph	(+)-pin
2282	-S-(C=NH)NH_2	1	Ph	4-$(HOCH_2)$-Ph	(+)-pin
2283	-S-(C=NH)NH_2	1	Ph	H	OH, OH
2284	-S-(C=NH)NH_2	1	Ph	Methyl	OH, OH
2285	-S-(C=NH)NH_2	1	Ph	Ethyl	OH, OH
2286	-S-(C=NH)NH_2	1	Ph	n-Propyl	OH, OH
2287	-S-(C=NH)NH_2	1	Ph	n-Butyl	OH, OH
2288	-S-(C=NH)NH_2	1	Ph	CH_2SCH_3	OH, OH
2289	-S-(C=NH)NH_2	1	Ph	$CH_2(SO)CH_3$	OH, OH
2290	-S-(C=NH)NH_2	1	Ph	$CH_2(SO_2)CH_3$	OH, OH
2291	-S-(C=NH)NH_2	1	Ph	$CH_2CH_2SCH_3$	OH, OH
2292	-S-(C=NH)NH_2	1	Ph	$CH_2CH_2(SO)CH_3$	OH, OH
2293	-S-(C=NH)NH_2	1	Ph	$CH_2CH_2(SO)_2CH_3$	OH, OH
2294	-S-(C=NH)NH_2	1	Ph	CH_2CN	OH, OH
2295	-S-(C=NH)NH_2	1	Ph	CH_2CH_2CN	OH, OH
2296	-S-(C=NH)NH_2	1	Ph	$CH_2CH_2CH_2CN$	OH, OH
2297	-S-(C=NH)NH_2	1	Ph	CF_3	OH, OH
2298	-S-(C=NH)NH_2	1	Ph	CF_2CF_3	OH, OH
2299	-S-(C=NH)NH_2	1	Ph	$CF_2CF_2CF_3$	OH, OH
2300	-S-(C=NH)NH_2	1	Ph	$CF_2CF_2CF_2CF_3$	OH, OH
2301	-S-(C=NH)NH_2	1	Ph	F_5-Ph	OH, OH
2302	-S-(C=NH)NH_2	1	Ph	CH_2CO_2H	OH, OH
2303	-S-(C=NH)NH_2	1	Ph	$(CH_2)_2CO_2H$	OH, OH
2304	-S-(C=NH)NH_2	1	Ph	$(CH_2)_3CO_2H$	OH, OH

2305	$-S-(C{=}NH)NH_2$	1	Ph	CH_2CN_4H	OH, OH
2306	$-S-(C{=}NH)NH_2$	1	Ph	$(CH_2)_2CN_4H$	OH, OH
2307	$-S-(C{=}NH)NH_2$	1	Ph	$(CH_2)_3CN_4H$	OH, OH
2308	$-S-(C{=}NH)NH_2$	1	Ph	CH_2NO_2	OH, OH
2309	$-S-(C{=}NH)NH_2$	1	Ph	$(CH_2)_2NO_2$	OH, OH
2310	$-S-(C{=}NH)NH_2$	1	Ph	$(CH_2)_3NO_2$	OH, OH
2311	$-S-(C{=}NH)NH_2$	1	Ph	CH_2OH	OH, OH
2312	$-S-(C{=}NH)NH_2$	1	Ph	$(CH_2)_2OH$	OH, OH
2313	$-S-(C{=}NH)NH_2$	1	Ph	$(CH_2)_3OH$	OH, OH
2314	$-S-(C{=}NH)NH_2$	1	Ph	CH_2CO_2Me	OH, OH
2315	$-S-(C{=}NH)NH_2$	1	Ph	$(CH_2)_2CO_2Me$	OH, OH
2316	$-S-(C{=}NH)NH_2$	1	Ph	$(CH_2)_3CO_2Me$	OH, OH
2317	$-S-(C{=}NH)NH_2$	1	Ph	$3-NO_2-Ph$	OH, OH
2318	$-S-(C{=}NH)NH_2$	1	Ph	$4-NO_2-Ph$	OH, OH
2319	$-S-(C{=}NH)NH_2$	1	Ph	$3-CO_2H-Ph$	OH, OH
2320	$-S-(C{=}NH)NH_2$	1	Ph	$4-CO_2H-Ph$	OH, OH
2321	$-S-(C{=}NH)NH_2$	1	Ph	$3-CN_4H-Ph$	OH, OH
2322	$-S-(C{=}NH)NH_2$	1	Ph	$4-CN_4H-Ph$	OH, OH
2323	$-S-(C{=}NH)NH_2$	1	Ph	$3-(HOCH_2)-Ph$	OH, OH
2324	$-S-(C{=}NH)NH_2$	1	Ph	$4-(HOCH_2)-Ph$	OH, OH
2325	CH_2NH_2	2	Ph	H	(+)-pin
2326	CH_2NH_2	2	Ph	H	OH, OH
2327	OMe	1	Ph	H	(+)-pin
2328	OMe	1	Ph	Methyl	(+)-pin
2329	OMe	1	Ph	Ethyl	(+)-pin
2330	OMe	1	Ph	n-Propyl	(+)-pin
2331	OMe	1	Ph	n-Butyl	(+)-pin
2332	OMe	1	Ph	CH_2SCH_3	(+)-pin
2333	OMe	1	Ph	$CH_2(SO)CH_3$	(+)-pin
2334	OMe	1	Ph	$CH_2(SO_2)CH_3$	(+)-pin
2335	OMe	1	Ph	$CH_2CH_2SCH_3$	(+)-pin
2336	OMe	1	Ph	$CH_2CH_2(SO)CH_3$	(+)-pin
2337	OMe	1	Ph	$CH_2CH_2(SO)_2CH_3$	(+)-pin
2338	OMe	1	Ph	CH_2CN	(+)-pin
2339	OMe	1	Ph	CH_2CH_2CN	(+)-pin
2340	OMe	1	Ph	$CH_2CH_2CH_2CN$	(+)-pin
2341	OMe	1	Ph	CF_3	(+)-pin
2342	OMe	1	Ph	CF_2CF_3	(+)-pin
2343	OMe	1	Ph	$CF_2CF_2CF_3$	(+)-pin
2344	OMe	1	Ph	$CF_2CF_2CF_2CF_3$	(+)-pin

2345	OMe	1	Ph	F_5-Ph	(+)-pin
2346	OMe	1	Ph	CH_2CO_2H	(+)-pin
2347	OMe	1	Ph	$(CH_2)_2CO_2H$	(+)-pin
2348	OMe	1	Ph	$(CH_2)_3CO_2H$	(+)-pin
2349	OMe	1	Ph	CH_2CN_4H	(+)-pin
2350	OMe	1	Ph	$(CH_2)_2CN_4H$	(+)-pin
2351	OMe	1	Ph	$(CH_2)_3CN_4H$	(+)-pin
2352	OMe	1	Ph	CH_2NO_2	(+)-pin
2353	OMe	1	Ph	$(CH_2)_2NO_2$	(+)-pin
2354	OMe	1	Ph	$(CH_2)_3NO_2$	(+)-pin
2355	OMe	1	Ph	CH_2OH	(+)-pin
2356	OMe	1	Ph	$(CH_2)_2OH$	(+)-pin
2357	OMe	1	Ph	$(CH_2)_3OH$	(+)-pin
2358	OMe	1	Ph	CH_2CO_2Me	(+)-pin
2359	OMe	1	Ph	$(CH_2)_2CO_2Me$	(+)-pin
2360	OMe	1	Ph	$(CH_2)_3CO_2Me$	(+)-pin
2361	OMe	1	Ph	3-NO_2-Ph	(+)-pin
2362	OMe	1	Ph	4-NO_2-Ph	(+)-pin
2363	OMe	1	Ph	3-CO_2H-Ph	(+)-pin
2364	OMe	1	Ph	4-CO_2H-Ph	(+)-pin
2365	OMe	1	Ph	3-CN_4H-Ph	(+)-pin
2366	OMe	1	Ph	4-CN_4H-Ph	(+)-pin
2367	OMe	1	Ph	3-$(HOCH_2)$-Ph	(+)-pin
2368	OMe	1	Ph	4-$(HOCH_2)$-Ph	(+)-pin
2369	OMe	1	Ph	H	OH, OH
2370	OMe	1	Ph	Methyl	OH, OH
2371	OMe	1	Ph	Ethyl	OH, OH
2372	OMe	1	Ph	n-Propyl	OH, OH
2373	OMe	1	Ph	n-Butyl	OH, OH
2374	OMe	1	Ph	CH_2SCH_3	OH, OH
2375	OMe	1	Ph	$CH_2(SO)CH_3$	OH, OH
2376	OMe	1	Ph	$CH_2(SO_2)CH_3$	OH, OH
2377	OMe	1	Ph	$CH_2CH_2SCH_3$	OH, OH
2378	OMe	1	Ph	$CH_2CH_2(SO)CH_3$	OH, OH
2379	OMe	1	Ph	$CH_2CH_2(SO)_2CH_3$	OH, OH
2380	OMe	1	Ph	CH_2CN	OH, OH
2381	OMe	1	Ph	CH_2CH_2CN	OH, OH
2382	OMe	1	Ph	$CH_2CH_2CH_2CN$	OH, OH
2383	OMe	1	Ph	CF_3	OH, OH
2384	OMe	1	Ph	CF_2CF_3	OH, OH

2385	OMe	1	Ph	$CF_2CF_2CF_3$	OH, OH	
2386	OMe	1	Ph	$CF_2CF_2CF_2CF_3$	OH, OH	
2387	OMe	1	Ph	F_5-Ph	OH, OH	
2388	OMe	1	Ph	CH_2CO_2H	OH, OH	
2389	OMe	1	Ph	$(CH_2)_2CO_2H$	OH, OH	
2390	OMe	1	Ph	$(CH_2)_3CO_2H$	OH, OH	
2391	OMe	1	Ph	CH_2CN_4H	OH, OH	
2392	OMe	1	Ph	$(CH_2)_2CN_4H$	OH, OH	
2393	OMe	1	Ph	$(CH_2)_3CN_4H$	OH, OH	
2394	OMe	1	Ph	CH_2NO_2	OH, OH	
2395	OMe	1	Ph	$(CH_2)_2NO_2$	OH, OH	
2396	OMe	1	Ph	$(CH_2)_3NO_2$	OH, OH	
2397	OMe	1	Ph	CH_2OH	OH, OH	
2398	OMe	1	Ph	$(CH_2)_2OH$	OH, OH	
2399	OMe	1	Ph	$(CH_2)_3OH$	OH, OH	
2400	OMe	1	Ph	CH_2CO_2Me	OH, OH	
2401	OMe	1	Ph	$(CH_2)_2CO_2Me$	OH, OH	
2402	OMe	1	Ph	$(CH_2)_3CO_2Me$	OH, OH	
2403	OMe	1	Ph	3-NO_2-Ph	OH, OH	
2404	OMe	1	Ph	4-NO_2-Ph	OH, OH	
2405	OMe	1	Ph	3-CO_2H-Ph	OH, OH	
2406	OMe	1	Ph	4-CO_2H-Ph	OH, OH	
2407	OMe	1	Ph	3-CN_4H-Ph	OH, OH	
2408	OMe	1	Ph	4-CN_4H-Ph	OH, OH	
2409	OMe	1	Ph	3-$(HOCH_2)$-Ph	OH, OH	
2410	OMe	1	Ph	4-$(HOCH_2)$-Ph	OH, OH	
2411	CH_2NH_2	1	$PhCH_2$	H	(+)-pin	BA
2412	CH_2NH_2	1	$PhCH_2$	Methyl	(+)-pin	BC
2413	CH_2NH_2	1	$PhCH_2$	Ethyl	(+)-pin	
2414	CH_2NH_2	1	$PhCH_2$	n-Propyl	(+)-pin	BD
2415	CH_2NH_2	1	$PhCH_2$	n-Butyl	(+)-pin	
2416	CH_2NH_2	1	$PhCH_2$	CH_2SCH_3	(+)-pin	BE
2417	CH_2NH_2	1	$PhCH_2$	$CH_2(SO)CH_3$	(+)-pin	
2418	CH_2NH_2	1	$PhCH_2$	$CH_2(SO_2)CH_3$	(+)-pin	
2419	CH_2NH_2	1	$PhCH_2$	$CH_2CH_2SCH_3$	(+)-pin	
2420	CH_2NH_2	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin	
2421	CH_2NH_2	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin	
2422	CH_2NH_2	1	$PhCH_2$	CH_2CN	(+)-pin	BF
2423	CH_2NH_2	1	$PhCH_2$	CH_2CH_2CN	(+)-pin	
2424	CH_2NH_2	1	$PhCH_2$	$CH_2CH_2CH_2CN$	(+)-pin	

2425	CH_2NH_2	1	$PhCH_2$	CF_3	(+)-pin	
2426	CH_2NH_2	1	$PhCH_2$	CF_2CF_3	(+)-pin	
2427	CH_2NH_2	1	$PhCH_2$	$CF_2CF_2CF_3$	(+)-pin	
2428	CH_2NH_2	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin	
2429	CH_2NH_2	1	$PhCH_2$	F_5-Ph	(+)-pin	
2430	CH_2NH_2	1	$PhCH_2$	CH_2CO_2H	(+)-pin	BG
2431	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2CO_2H$	(+)-pin	
2432	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3CO_2H$	(+)-pin	
2433	CH_2NH_2	1	$PhCH_2$	CH_2CN_4H	(+)-pin	
2434	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2CN_4H$	(+)-pin	
2435	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3CN_4H$	(+)-pin	
2436	CH_2NH_2	1	$PhCH_2$	CH_2NO_2	(+)-pin	
2437	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2NO_2$	(+)-pin	
2438	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3NO_2$	(+)-pin	
2439	CH_2NH_2	1	$PhCH_2$	CH_2OH	(+)-pin	CV
2440	CH_2NH_2	1	$PhCH_2$	CH_2OCH_2Ph	(+)-pin	CW
2441	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	
2442	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3OH$	(+)-pin	
2443	CH_2NH_2	1	$PhCH_2$	CH_2CO_2Me	(+)-pin	CX
2444	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2CO_2Me$	(+)-pin	
2445	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3CO_2Me$	(+)-pin	
2446	CH_2NH_2	1	$PhCH_2$	Ph	(+)-pin	
2447	CH_2NH_2	1	$PhCH_2$	$PhCH_2$	(+)-pin	
2448	CH_2NH_2	1	$PhCH_2$	3-NO_2-Ph	(+)-pin	
2449	CH_2NH_2	1	$PhCH_2$	4-NO_2-Ph	(+)-pin	
2450	CH_2NH_2	1	$PhCH_2$	3-CO_2H-Ph	(+)-pin	
2451	CH_2NH_2	1	$PhCH_2$	4-CO_2H-Ph	(+)-pin	
2452	CH_2NH_2	1	$PhCH_2$	3-CN_4H-Ph	(+)-pin	
2453	CH_2NH_2	1	$PhCH_2$	4-CN_4H-Ph	(+)-pin	
2454	CH_2NH_2	1	$PhCH_2$	3-$(HOCH_2)$-Ph	(+)-pin	
2455	CH_2NH_2	1	$PhCH_2$	4-$(HOCH_2)$-Ph	(+)-pin	
2456	$NH(C{=}NH)NH_2$	1	$PhCH_2$	H	(+)-pin	
2457	$NH(C{=}NH)NH_2$	1	$PhCH_2$	Methyl	(+)-pin	
2458	$NH(C{=}NH)NH_2$	1	$PhCH_2$	Ethyl	(+)-pin	
2459	$NH(C{=}NH)NH_2$	1	$PhCH_2$	n-Propyl	(+)-pin	
2460	$NH(C{=}NH)NH_2$	1	$PhCH_2$	n-Butyl	(+)-pin	
2461	$NH(C{=}NH)NH_2$	1	$PhCH_2$	CH_2SCH_3	(+)-pin	
2462	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$CH_2(SO)CH_3$	(+)-pin	
2463	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$CH_2(SO_2)CH_3$	(+)-pin	
2464	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$CH_2CH_2SCH_3$	(+)-pin	

2465	NH(C=NH)NH_2	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin	
2466	NH(C=NH)NH_2	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin	
2467	NH(C=NH)NH_2	1	$PhCH_2$	CH_2CN	(+)-pin	
2468	NH(C=NH)NH_2	1	$PhCH_2$	CH_2CH_2CN	(+)-pin	
2469	NH(C=NH)NH_2	1	$PhCH_2$	$CH_2CH_2CH_2CN$	(+)-pin	
2470	NH(C=NH)NH_2	1	$PhCH_2$	CF_3	(+)-pin	
2471	NH(C=NH)NH_2	1	$PhCH_2$	CF_2CF_3	(+)-pin	
2472	NH(C=NH)NH_2	1	$PhCH_2$	$CF_2CF_2CF_3$	(+)-pin	
2473	NH(C=NH)NH_2	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin	
2474	NH(C=NH)NH_2	1	$PhCH_2$	F_5-Ph	(+)-pin	
2475	NH(C=NH)NH_2	1	$PhCH_2$	CH_2CO_2H	(+)-pin	
2476	NH(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2CO_2H$	(+)-pin	
2477	NH(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3CO_2H$	(+)-pin	
2478	NH(C=NH)NH_2	1	$PhCH_2$	CH_2CN_4H	(+)-pin	
2479	NH(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2CN_4H$	(+)-pin	
2480	NH(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3CN_4H$	(+)-pin	
2481	NH(C=NH)NH_2	1	$PhCH_2$	CH_2NO_2	(+)-pin	
2482	NH(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2NO_2$	(+)-pin	
2483	NH(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3NO_2$	(+)-pin	
2484	NH(C=NH)NH_2	1	$PhCH_2$	CH_2OH	(+)-pin	
2485	NH(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	
2486	NH(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3OH$	(+)-pin	
2487	NH(C=NH)NH_2	1	$PhCH_2$	CH_2CO_2Me	(+)-pin	
2488	NH(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2CO_2Me$	(+)-pin	
2489	NH(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3CO_2Me$	(+)-pin	
2490	NH(C=NH)NH_2	1	$PhCH_2$	Ph	(+)-pin	
2491	NH(C=NH)NH_2	1	$PhCH_2$	3-NO_2-Ph	(+)-pin	CY
2492	NH(C=NH)NH_2	1	$PhCH_2$	4-NO_2-Ph	(+)-pin	
2493	NH(C=NH)NH_2	1	$PhCH_2$	3-CO_2H-Ph	(+)-pin	
2494	NH(C=NH)NH_2	1	$PhCH_2$	4-CO_2H-Ph	(+)-pin	
2495	NH(C=NH)NH_2	1	$PhCH_2$	3-CN_4H-Ph	(+)-pin	
2496	NH(C=NH)NH_2	1	$PhCH_2$	4-CN_4H-Ph	(+)-pin	
2497	NH(C=NH)NH_2	1	$PhCH_2$	3-$(HOCH_2)$-Ph	(+)-pin	
2498	NH(C=NH)NH_2	1	$PhCH_2$	4-$(HOCH_2)$-Ph	(+)-pin	
2499	CH_2NH_2	1	$PhCH_2$	H	OH, OH	BH
2500	CH_2NH_2	1	$PhCH_2$	Methyl	OH, OH	
2501	CH_2NH_2	1	$PhCH_2$	Ethyl	OH, OH	
2502	CH_2NH_2	1	$PhCH_2$	n-Propyl	OH, OH	
2503	CH_2NH_2	1	$PhCH_2$	n-Butyl	OH, OH	
2504	CH_2NH_2	1	$PhCH_2$	CH_2SCH_3	OH, OH	

2505	CH_2NH_2	1	$PhCH_2$	$CH_2(SO)CH_3$	OH, OH
2506	CH_2NH_2	1	$PhCH_2$	$CH_2(SO_2)CH_3$	OH, OH
2507	CH_2NH_2	1	$PhCH_2$	$CH_2CH_2SCH_3$	OH, OH
2508	CH_2NH_2	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	OH, OH
2509	CH_2NH_2	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH
2510	CH_2NH_2	1	$PhCH_2$	CH_2CN	OH, OH
2511	CH_2NH_2	1	$PhCH_2$	CH_2CH_2CN	OH, OH
2512	CH_2NH_2	1	$PhCH_2$	$CH_2CH_2CH_2CN$	OH, OH
2513	CH_2NH_2	1	$PhCH_2$	CF_3	OH, OH
2514	CH_2NH_2	1	$PhCH_2$	CF_2CF_3	OH, OH
2515	CH_2NH_2	1	$PhCH_2$	$CF_2CF_2CF_3$	OH, OH
2516	CH_2NH_2	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	OH, OH
2517	CH_2NH_2	1	$PhCH_2$	F_5-Ph	OH, OH
2518	CH_2NH_2	1	$PhCH_2$	CH_2CO_2H	OH, OH
2519	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2CO_2H$	OH, OH
2520	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3CO_2H$	OH, OH
2521	CH_2NH_2	1	$PhCH_2$	CH_2CN_4H	OH, OH
2522	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2CN_4H$	OH, OH
2523	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3CN_4H$	OH, OH
2524	CH_2NH_2	1	$PhCH_2$	CH_2NO_2	OH, OH
2525	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2NO_2$	OH, OH
2526	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3NO_2$	OH, OH
2527	CH_2NH_2	1	$PhCH_2$	CH_2OH	OH, OH
2528	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2OH$	OH, OH
2529	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3OH$	OH, OH
2530	CH_2NH_2	1	$PhCH_2$	CH_2CO_2Me	OH, OH
2531	CH_2NH_2	1	$PhCH_2$	$(CH_2)_2CO_2Me$	OH, OH
2532	CH_2NH_2	1	$PhCH_2$	$(CH_2)_3CO_2Me$	OH, OH
2533	CH_2NH_2	1	$PhCH_2$	Ph	OH, OH
2534	CH_2NH_2	1	$PhCH_2$	3-NO_2-Ph	OH, OH
2535	CH_2NH_2	1	$PhCH_2$	4-NO_2-Ph	OH, OH
2536	CH_2NH_2	1	$PhCH_2$	3-CO_2H-Ph	OH, OH
2537	CH_2NH_2	1	$PhCH_2$	4-CO_2H-Ph	OH, OH
2538	CH_2NH_2	1	$PhCH_2$	3-CN_4H-Ph	OH, OH
2539	CH_2NH_2	1	$PhCH_2$	4-CN_4H-Ph	OH, OH
2540	CH_2NH_2	1	$PhCH_2$	3-$(HOCH_2)$-Ph	OH, OH
2541	CH_2NH_2	1	$PhCH_2$	4-$(HOCH_2)$-Ph	OH, OH
2542	$NH(C{=}NH)NH_2$	1	$PhCH_2$	H	OH, OH
2543	$NH(C{=}NH)NH_2$	1	$PhCH_2$	Methyl	OH, OH
2544	$NH(C{=}NH)NH_2$	1	$PhCH_2$	Ethyl	OH, OH

2545	NH(C=NH)NH2	1	$PhCH_2$	n-Propyl	OH, OH
2546	NH(C=NH)NH2	1	$PhCH_2$	n-Butyl	OH, OH
2547	NH(C=NH)NH2	1	$PhCH_2$	CH_2SCH_3	OH, OH
2548	NH(C=NH)NH2	1	$PhCH_2$	$CH_2(SO)CH_3$	OH, OH
2549	NH(C=NH)NH2	1	$PhCH_2$	$CH_2(SO_2)CH_3$	OH, OH
2550	NH(C=NH)NH2	1	$PhCH_2$	$CH_2CH_2SCH_3$	OH, OH
2551	NH(C=NH)NH2	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	OH, OH
2552	NH(C=NH)NH2	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH
2553	NH(C=NH)NH2	1	$PhCH_2$	CH_2CN	OH, OH
2554	NH(C=NH)NH2	1	$PhCH_2$	CH_2CH_2CN	OH, OH
2555	NH(C=NH)NH2	1	$PhCH_2$	$CH_2CH_2CH_2CN$	OH, OH
2556	NH(C=NH)NH2	1	$PhCH_2$	CF_3	OH, OH
2557	NH(C=NH)NH2	1	$PhCH_2$	CF_2CF_3	OH, OH
2558	NH(C=NH)NH2	1	$PhCH_2$	$CF_2CF_2CF_3$	OH, OH
2559	NH(C=NH)NH2	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	OH, OH
2560	NH(C=NH)NH2	1	$PhCH_2$	F_5-Ph	OH, OH
2561	NH(C=NH)NH2	1	$PhCH_2$	CH_2CO_2H	OH, OH
2562	NH(C=NH)NH2	1	$PhCH_2$	$(CH_2)_2CO_2H$	OH, OH
2563	NH(C=NH)NH2	1	$PhCH_2$	$(CH_2)_3CO_2H$	OH, OH
2564	NH(C=NH)NH2	1	$PhCH_2$	CH_2CN_4H	OH, OH
2565	NH(C=NH)NH2	1	$PhCH_2$	$(CH_2)_2CN_4H$	OH, OH
2566	NH(C=NH)NH2	1	$PhCH_2$	$(CH_2)_3CN_4H$	OH, OH
2567	NH(C=NH)NH2	1	$PhCH_2$	CH_2NO_2	OH, OH
2568	NH(C=NH)NH2	1	$PhCH_2$	$(CH_2)_2NO_2$	OH, OH
2569	NH(C=NH)NH2	1	$PhCH_2$	$(CH_2)_3NO_2$	OH, OH
2570	NH(C=NH)NH2	1	$PhCH_2$	CH_2OH	OH, OH
2571	NH(C=NH)NH2	1	$PhCH_2$	$(CH_2)_2OH$	OH, OH
2572	NH(C=NH)NH2	1	$PhCH_2$	$(CH_2)_3OH$	OH, OH
2573	NH(C=NH)NH2	1	$PhCH_2$	CH_2CO_2Me	OH, OH
2574	NH(C=NH)NH2	1	$PhCH_2$	$(CH_2)_2CO_2Me$	OH, OH
2575	NH(C=NH)NH2	1	$PhCH_2$	$(CH_2)_3CO_2Me$	OH, OH
2576	NH(C=NH)NH2	1	$PhCH_2$	3-NO_2-Ph	OH, OH
2577	NH(C=NH)NH2	1	$PhCH_2$	4-NO_2-Ph	OH, OH
2578	NH(C=NH)NH2	1	$PhCH_2$	3-CO_2H-Ph	OH, OH
2579	NH(C=NH)NH2	1	$PhCH_2$	4-CO_2H-Ph	OH, OH
2580	NH(C=NH)NH2	1	$PhCH_2$	3-CN_4H-Ph	OH, OH
2581	NH(C=NH)NH2	1	$PhCH_2$	4-CN_4H-Ph	OH, OH
2582	NH(C=NH)NH2	1	$PhCH_2$	3-($HOCH_2$)-Ph	OH, OH
2583	NH(C=NH)NH2	1	$PhCH_2$	4-($HOCH_2$)-Ph	OH, OH
2584	-S-(C=NH)NH2	1	$PhCH_2$	H	(+)-pin

2585	-S-(C=NH)NH_2	1	$PhCH_2$	Methyl	(+)-pin
2586	-S-(C=NH)NH_2	1	$PhCH_2$	Ethyl	(+)-pin
2587	-S-(C=NH)NH_2	1	$PhCH_2$	n-Propyl	(+)-pin
2588	-S-(C=NH)NH_2	1	$PhCH_2$	n-Butyl	(+)-pin
2589	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2SCH_3	(+)-pin
2590	-S-(C=NH)NH_2	1	$PhCH_2$	$CH_2(SO)CH_3$	(+)-pin
2591	-S-(C=NH)NH_2	1	$PhCH_2$	$CH_2(SO_2)CH_3$	(+)-pin
2592	-S-(C=NH)NH_2	1	$PhCH_2$	$CH_2CH_2SCH_3$	(+)-pin
2593	-S-(C=NH)NH_2	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin
2594	-S-(C=NH)NH_2	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin
2595	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2CN	(+)-pin
2596	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2CH_2CN	(+)-pin
2597	-S-(C=NH)NH_2	1	$PhCH_2$	$CH_2CH_2CH_2CN$	(+)-pin
2598	-S-(C=NH)NH_2	1	$PhCH_2$	CF_3	(+)-pin
2599	-S-(C=NH)NH_2	1	$PhCH_2$	CF_2CF_3	(+)-pin
2600	-S-(C=NH)NH_2	1	$PhCH_2$	$CF_2CF_2CF_3$	(+)-pin
2601	-S-(C=NH)NH_2	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin
2602	-S-(C=NH)NH_2	1	$PhCH_2$	F_5-Ph	(+)-pin
2603	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2CO_2H	(+)-pin
2604	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2CO_2H$	(+)-pin
2605	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3CO_2H$	(+)-pin
2606	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2CN_4H	(+)-pin
2607	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2CN_4H$	(+)-pin
2608	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3CN_4H$	(+)-pin
2609	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2NO_2	(+)-pin
2610	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2NO_2$	(+)-pin
2611	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3NO_2$	(+)-pin
2612	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2OH	(+)-pin
2613	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
2614	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3OH$	(+)-pin
2615	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2CO_2Me	(+)-pin
2616	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2CO_2Me$	(+)-pin
2617	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3CO_2Me$	(+)-pin
2618	-S-(C=NH)NH_2	1	$PhCH_2$	3-NO_2-Ph	(+)-pin
2619	-S-(C=NH)NH_2	1	$PhCH_2$	4-NO_2-Ph	(+)-pin
2620	-S-(C=NH)NH_2	1	$PhCH_2$	3-CO_2H-Ph	(+)-pin
2621	-S-(C=NH)NH_2	1	$PhCH_2$	4-CO_2H-Ph	(+)-pin
2622	-S-(C=NH)NH_2	1	$PhCH_2$	3-CN_4H-Ph	(+)-pin
2623	-S-(C=NH)NH_2	1	$PhCH_2$	4-CN_4H-Ph	(+)-pin
2624	-S-(C=NH)NH_2	1	$PhCH_2$	3-$(HOCH_2)$-Ph	(+)-pin

2625	-S-(C=NH)NH_2	1	$PhCH_2$	4-($HOCH_2$)-Ph	(+)-pin
2626	-S-(C=NH)NH_2	1	$PhCH_2$	H	OH, OH
2627	-S-(C=NH)NH_2	1	$PhCH_2$	Methyl	OH, OH
2628	-S-(C=NH)NH_2	1	$PhCH_2$	Ethyl	OH, OH
2629	-S-(C=NH)NH_2	1	$PhCH_2$	n-Propyl	OH, OH
2630	-S-(C=NH)NH_2	1	$PhCH_2$	n-Butyl	OH, OH
2631	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2SCH_3	OH, OH
2632	-S-(C=NH)NH_2	1	$PhCH_2$	$CH_2(SO)CH_3$	OH, OH
2633	-S-(C=NH)NH_2	1	$PhCH_2$	$CH_2(SO_2)CH_3$	OH, OH
2634	-S-(C=NH)NH_2	1	$PhCH_2$	$CH_2CH_2SCH_3$	OH, OH
2635	-S-(C=NH)NH_2	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	OH, OH
2636	-S-(C=NH)NH_2	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH
2637	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2CN	OH, OH
2638	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2CH_2CN	OH, OH
2639	-S-(C=NH)NH_2	1	$PhCH_2$	$CH_2CH_2CH_2CN$	OH, OH
2640	-S-(C=NH)NH_2	1	$PhCH_2$	CF_3	OH, OH
2641	-S-(C=NH)NH_2	1	$PhCH_2$	CF_2CF_3	OH, OH
2642	-S-(C=NH)NH_2	1	$PhCH_2$	$CF_2CF_2CF_3$	OH, OH
2643	-S-(C=NH)NH_2	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	OH, OH
2644	-S-(C=NH)NH_2	1	$PhCH_2$	F_5-Ph	OH, OH
2645	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2CO_2H	OH, OH
2646	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2CO_2H$	OH, OH
2647	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3CO_2H$	OH, OH
2648	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2CN_4H	OH, OH
2649	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2CN_4H$	OH, OH
2650	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3CN_4H$	OH, OH
2651	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2NO_2	OH, OH
2652	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2NO_2$	OH, OH
2653	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3NO_2$	OH, OH
2654	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2OH	OH, OH
2655	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2OH$	OH, OH
2656	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3OH$	OH, OH
2657	-S-(C=NH)NH_2	1	$PhCH_2$	CH_2CO_2Me	OH, OH
2658	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_2CO_2Me$	OH, OH
2659	-S-(C=NH)NH_2	1	$PhCH_2$	$(CH_2)_3CO_2Me$	OH, OH
2660	-S-(C=NH)NH_2	1	$PhCH_2$	3-NO_2-Ph	OH, OH
2661	-S-(C=NH)NH_2	1	$PhCH_2$	4-NO_2-Ph	OH, OH
2662	-S-(C=NH)NH_2	1	$PhCH_2$	3-CO_2H-Ph	OH, OH
2663	-S-(C=NH)NH_2	1	$PhCH_2$	4-CO_2H-Ph	OH, OH
2664	-S-(C=NH)NH_2	1	$PhCH_2$	3-CN_4H-Ph	OH, OH

2665	-S-(C=NH)NH_2	1	$PhCH_2$	4-CN_4H-Ph	OH, OH
2666	-S-(C=NH)NH_2	1	$PhCH_2$	3-($HOCH_2$)-Ph	OH, OH
2667	-S-(C=NH)NH_2	1	$PhCH_2$	4-($HOCH_2$)-Ph	OH, OH
2668	OMe	1	$PhCH_2$	H	(+)-pin
2669	OMe	1	$PhCH_2$	Methyl	(+)-pin
2670	OMe	1	$PhCH_2$	Ethyl	(+)-pin
2671	OMe	1	$PhCH_2$	n-Propyl	(+)-pin
2672	OMe	1	$PhCH_2$	n-Butyl	(+)-pin
2673	OMe	1	$PhCH_2$	CH_2SCH_3	(+)-pin
2674	OMe	1	$PhCH_2$	$CH_2(SO)CH_3$	(+)-pin
2675	OMe	1	$PhCH_2$	$CH_2(SO_2)CH_3$	(+)-pin
2676	OMe	1	$PhCH_2$	$CH_2CH_2SCH_3$	(+)-pin
2677	OMe	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin
2678	OMe	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin
2679	OMe	1	$PhCH_2$	CH_2CN	(+)-pin
2680	OMe	1	$PhCH_2$	CH_2CH_2CN	(+)-pin
2681	OMe	1	$PhCH_2$	$CH_2CH_2CH_2CN$	(+)-pin
2682	OMe	1	$PhCH_2$	CF_3	(+)-pin
2683	OMe	1	$PhCH_2$	CF_2CF_3	(+)-pin
2684	OMe	1	$PhCH_2$	$CF_2CF_2CF_3$	(+)-pin
2685	OMe	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin
2686	OMe	1	$PhCH_2$	F_5-Ph	(+)-pin
2687	OMe	1	$PhCH_2$	CH_2CO_2H	(+)-pin
2688	OMe	1	$PhCH_2$	$(CH_2)_2CO_2H$	(+)-pin
2689	OMe	1	$PhCH_2$	$(CH_2)_3CO_2H$	(+)-pin
2690	OMe	1	$PhCH_2$	CH_2CN_4H	(+)-pin
2691	OMe	1	$PhCH_2$	$(CH_2)_2CN_4H$	(+)-pin
2692	OMe	1	$PhCH_2$	$(CH_2)_3CN_4H$	(+)-pin
2693	OMe	1	$PhCH_2$	CH_2NO_2	(+)-pin
2694	OMe	1	$PhCH_2$	$(CH_2)_2NO_2$	(+)-pin
2695	OMe	1	$PhCH_2$	$(CH_2)_3NO_2$	(+)-pin
2696	OMe	1	$PhCH_2$	CH_2OH	(+)-pin
2697	OMe	1	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
2698	OMe	1	$PhCH_2$	$(CH_2)_3OH$	(+)-pin
2699	OMe	1	$PhCH_2$	CH_2CO_2Me	(+)-pin
2700	OMe	1	$PhCH_2$	$(CH_2)_2CO_2Me$	(+)-pin
2701	OMe	1	$PhCH_2$	$(CH_2)_3CO_2Me$	(+)-pin
2702	OMe	1	$PhCH_2$	3-NO_2-Ph	(+)-pin
2703	OMe	1	$PhCH_2$	4-NO_2-Ph	(+)-pin
2704	OMe	1	$PhCH_2$	3-CO_2H-Ph	(+)-pin

2705	OMe	1	$PhCH_2$	$4-CO_2H-Ph$	(+)-pin
2706	OMe	1	$PhCH_2$	$3-CN_4H-Ph$	(+)-pin
2707	OMe	1	$PhCH_2$	$4-CN_4H-Ph$	(+)-pin
2708	OMe	1	$PhCH_2$	$3-(HOCH_2)-Ph$	(+)-pin
2709	OMe	1	$PhCH_2$	$4-(HOCH_2)-Ph$	(+)-pin
2710	OMe	1	$PhCH_2$	H	OH, OH
2711	OMe	1	$PhCH_2$	Methyl	OH, OH
2712	OMe	1	$PhCH_2$	Ethyl	OH, OH
2713	OMe	1	$PhCH_2$	n-Propyl	OH, OH
2714	OMe	1	$PhCH_2$	n-Butyl	OH, OH
2715	OMe	1	$PhCH_2$	CH_2SCH_3	OH, OH
2716	OMe	1	$PhCH_2$	$CH_2(SO)CH_3$	OH, OH
2717	OMe	1	$PhCH_2$	$CH_2(SO_2)CH_3$	OH, OH
2718	OMe	1	$PhCH_2$	$CH_2CH_2SCH_3$	OH, OH
2719	OMe	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	OH, OH
2720	OMe	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH
2721	OMe	1	$PhCH_2$	CH_2CN	OH, OH
2722	OMe	1	$PhCH_2$	CH_2CH_2CN	OH, OH
2723	OMe	1	$PhCH_2$	$CH_2CH_2CH_2CN$	OH, OH
2724	OMe	1	$PhCH_2$	CF_3	OH, OH
2725	OMe	1	$PhCH_2$	CF_2CF_3	OH, OH
2726	OMe	1	$PhCH_2$	$CF_2CF_2CF_3$	OH, OH
2727	OMe	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	OH, OH
2728	OMe	1	$PhCH_2$	F_5-Ph	OH, OH
2729	OMe	1	$PhCH_2$	CH_2CO_2H	OH, OH
2730	OMe	1	$PhCH_2$	$(CH_2)_2CO_2H$	OH, OH
2731	OMe	1	$PhCH_2$	$(CH_2)_3CO_2H$	OH, OH
2732	OMe	1	$PhCH_2$	CH_2CN_4H	OH, OH
2733	OMe	1	$PhCH_2$	$(CH_2)_2CN_4H$	OH, OH
2734	OMe	1	$PhCH_2$	$(CH_2)_3CN_4H$	OH, OH
2735	OMe	1	$PhCH_2$	CH_2NO_2	OH, OH
2736	OMe	1	$PhCH_2$	$(CH_2)_2NO_2$	OH, OH
2737	OMe	1	$PhCH_2$	$(CH_2)_3NO_2$	OH, OH
2738	OMe	1	$PhCH_2$	CH_2OH	OH, OH
2739	OMe	1	$PhCH_2$	$(CH_2)_2OH$	OH, OH
2740	OMe	1	$PhCH_2$	$(CH_2)_3OH$	OH, OH
2741	OMe	1	$PhCH_2$	CH_2CO_2Me	OH, OH
2742	OMe	1	$PhCH_2$	$(CH_2)_2CO_2Me$	OH, OH
2743	OMe	1	$PhCH_2$	$(CH_2)_3CO_2Me$	OH, OH
2744	OMe	1	$PhCH_2$	$3-NO_2-Ph$	OH, OH

2745	OMe	1	$PhCH_2$	$4\text{-}NO_2\text{-}Ph$	OH, OH	
2746	OMe	1	$PhCH_2$	$3\text{-}CO_2H\text{-}Ph$	OH, OH	
2747	OMe	1	$PhCH_2$	$4\text{-}CO_2H\text{-}Ph$	OH, OH	
2748	OMe	1	$PhCH_2$	$3\text{-}CN_4H\text{-}Ph$	OH, OH	
2749	OMe	1	$PhCH_2$	$4\text{-}CN_4H\text{-}Ph$	OH, OH	
2750	OMe	1	$PhCH_2$	$3\text{-}(HOCH_2)\text{-}Ph$	OH, OH	
2751	OMe	1	$PhCH_2$	$4\text{-}(HOCH_2)\text{-}Ph$	OH, OH	
2752	CH_2NH_2	1	$PhCH_2CH_2$	H	(+)-pin	BI
2753	CH_2NH_2	1	$PhCH_2CH_2$	Methyl	(+)-pin	
2754	CH_2NH_2	1	$PhCH_2CH_2$	Ethyl	(+)-pin	
2755	CH_2NH_2	1	$PhCH_2CH_2$	n-Propyl	(+)-pin	
2756	CH_2NH_2	1	$PhCH_2CH_2$	n-Butyl	(+)-pin	
2757	CH_2NH_2	1	$PhCH_2CH_2$	CH_2SCH_3	(+)-pin	
2758	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	(+)-pin	
2759	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	(+)-pin	
2760	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	(+)-pin	
2761	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin	
2762	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin	
2763	CH_2NH_2	1	$PhCH_2CH_2$	CH_2CN	(+)-pin	
2764	CH_2NH_2	1	$PhCH_2CH_2$	CH_2CH_2CN	(+)-pin	
2765	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	(+)-pin	
2766	CH_2NH_2	1	$PhCH_2CH_2$	CF_3	(+)-pin	
2767	CH_2NH_2	1	$PhCH_2CH_2$	CF_2CF_3	(+)-pin	
2768	CH_2NH_2	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	(+)-pin	
2769	CH_2NH_2	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin	
2770	CH_2NH_2	1	$PhCH_2CH_2$	$F_5\text{-}Ph$	(+)-pin	
2771	CH_2NH_2	1	$PhCH_2CH_2$	CH_2CO_2H	(+)-pin	
2772	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	(+)-pin	
2773	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	(+)-pin	
2774	CH_2NH_2	1	$PhCH_2CH_2$	CH_2CN_4H	(+)-pin	
2775	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	(+)-pin	
2776	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	(+)-pin	
2777	CH_2NH_2	1	$PhCH_2CH_2$	CH_2NO_2	(+)-pin	
2778	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	(+)-pin	
2779	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	(+)-pin	
2780	CH_2NH_2	1	$PhCH_2CH_2$	CH_2OH	(+)-pin	CZ
2781	CH_2NH_2	1	$PhCH_2CH_2$	CH_2OCH_2Ph	(+)-pin	DA
2782	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_2OH$	(+)-pin	
2783	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3OH$	(+)-pin	
2784	CH_2NH_2	1	$PhCH_2CH_2$	CH_2CO_2Me	(+)-pin	

2785	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	(+)-pin
2786	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	(+)-pin
2787	CH_2NH_2	1	$PhCH_2CH_2$	3-NO_2-Ph	(+)-pin
2788	CH_2NH_2	1	$PhCH_2CH_2$	4-NO_2-Ph	(+)-pin
2789	CH_2NH_2	1	$PhCH_2CH_2$	3-CO_2H-Ph	(+)-pin
2790	CH_2NH_2	1	$PhCH_2CH_2$	4-CO_2H-Ph	(+)-pin
2791	CH_2NH_2	1	$PhCH_2CH_2$	3-CN_4H-Ph	(+)-pin
2792	CH_2NH_2	1	$PhCH_2CH_2$	4-CN_4H-Ph	(+)-pin
2793	CH_2NH_2	1	$PhCH_2CH_2$	3-$(HOCH_2)$-Ph	(+)-pin
2794	CH_2NH_2	1	$PhCH_2CH_2$	4-$(HOCH_2)$-Ph	(+)-pin
2795	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	H	(+)-pin
2796	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	Methyl	(+)-pin
2797	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	Ethyl	(+)-pin
2798	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	n-Propyl	(+)-pin
2799	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	n-Butyl	(+)-pin
2800	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2SCH_3	(+)-pin
2801	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	(+)-pin
2802	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	(+)-pin
2803	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	(+)-pin
2804	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin
2805	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin
2806	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2CN	(+)-pin
2807	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2CH_2CN	(+)-pin
2808	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	(+)-pin
2809	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CF_3	(+)-pin
2810	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CF_2CF_3	(+)-pin
2811	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	(+)-pin
2812	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin
2813	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	F_5-Ph	(+)-pin
2814	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2CO_2H	(+)-pin
2815	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	(+)-pin
2816	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	(+)-pin
2817	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2CN_4H	(+)-pin
2818	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	(+)-pin
2819	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	(+)-pin
2820	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2NO_2	(+)-pin
2821	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	(+)-pin
2822	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	(+)-pin
2823	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2OH	(+)-pin
2824	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_2OH$	(+)-pin

2825	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_3OH$	(+)-pin	
2826	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2CO_2Me	(+)-pin	
2827	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	(+)-pin	
2828	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	(+)-pin	
2829	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$3\text{-}NO_2\text{-}Ph$	(+)-pin	
2830	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$4\text{-}NO_2\text{-}Ph$	(+)-pin	
2831	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$3\text{-}CO_2H\text{-}Ph$	(+)-pin	
2832	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$4\text{-}CO_2H\text{-}Ph$	(+)-pin	
2833	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$3\text{-}CN_4H\text{-}Ph$	(+)-pin	
2834	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$4\text{-}CN_4H\text{-}Ph$	(+)-pin	
2835	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$3\text{-}(HOCH_2)\text{-}Ph$	(+)-pin	
2836	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$4\text{-}(HOCH_2)\text{-}Ph$	(+)-pin	
2837	CH_2NH_2	1	$PhCH_2CH_2$	H	OH, OH	BJ
2838	CH_2NH_2	1	$PhCH_2CH_2$	Methyl	OH, OH	
2839	CH_2NH_2	1	$PhCH_2CH_2$	Ethyl	OH, OH	
2840	CH_2NH_2	1	$PhCH_2CH_2$	n-Propyl	OH, OH	
2841	CH_2NH_2	1	$PhCH_2CH_2$	n-Butyl	OH, OH	
2842	CH_2NH_2	1	$PhCH_2CH_2$	CH_2SCH_3	OH, OH	
2843	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	OH, OH	
2844	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	OH, OH	
2845	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	OH, OH	
2846	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	OH, OH	
2847	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH	
2848	CH_2NH_2	1	$PhCH_2CH_2$	CH_2CN	OH, OH	
2849	CH_2NH_2	1	$PhCH_2CH_2$	CH_2CH_2CN	OH, OH	
2850	CH_2NH_2	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	OH, OH	
2851	CH_2NH_2	1	$PhCH_2CH_2$	CF_3	OH, OH	
2852	CH_2NH_2	1	$PhCH_2CH_3$	CF_2CF_3	OH, OH	
2853	CH_2NH_2	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	OH, OH	
2854	CH_2NH_2	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	OH, OH	
2855	CH_2NH_2	1	$PhCH_2CH_2$	$F_5\text{-}Ph$	OH, OH	
2856	CH_2NH_2	1	$PhCH_2CH_2$	CH_2CO_2H	OH, OH	
2857	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	OH, OH	
2858	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	OH, OH	
2859	CH_2NH_2	1	$PhCH_2CH_2$	CH_2CN_4H	OH, OH	
2860	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	OH, OH	
2861	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	OH, OH	
2862	CH_2NH_2	1	$PhCH_2CH_2$	CH_2NO_2	OH, OH	
2863	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	OH, OH	
2864	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	OH, OH	

2865	CH_2NH_2	1	$PhCH_2CH_2$	CH_2OH	OH, OH
2866	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_2OH$	OH, OH
2867	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3OH$	OH, OH
2868	CH_2NH_2	1	$PhCH_2CH_2$	CH_2CO_2Me	OH, OH
2869	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	OH, OH
2870	CH_2NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	OH, OH
2871	CH_2NH_2	1	$PhCH_2CH_2$	3-NO_2-Ph	OH, OH
2872	CH_2NH_2	1	$PhCH_2CH_2$	4-NO_2-Ph	OH, OH
2873	CH_2NH_2	1	$PhCH_2CH_2$	3-CO_2H-Ph	OH, OH
2874	CH_2NH_2	1	$PhCH_2CH_2$	4-CO_2H-Ph	OH, OH
2875	CH_2NH_2	1	$PhCH_2CH_2$	3-CN_4H-Ph	OH, OH
2876	CH_2NH_2	1	$PhCH_2CH_2$	4-CN_4H-Ph	OH, OH
2877	CH_2NH_2	1	$PhCH_2CH_2$	3-$(HOCH_2)$-Ph	OH, OH
2878	CH_2NH_2	1	$PhCH_2CH_2$	4-$(HOCH_2)$-Ph	OH, OH
2879	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	H	OH, OH
2880	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	Methyl	OH, OH
2881	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	Ethyl	OH, OH
2882	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	n-Propyl	OH, OH
2883	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	n-Butyl	OH, OH
2884	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2SCH_3	OH, OH
2885	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	OH, OH
2886	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	OH, OH
2887	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	OH, OH
2888	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	OH, OH
2889	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH
2890	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2CN	OH, OH
2891	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2CH_2CN	OH, OH
2892	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	OH, OH
2893	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CF_3	OH, OH
2894	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CF_2CF_3	OH, OH
2895	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	OH, OH
2896	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	OH, OH
2897	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	F_5-Ph	OH, OH
2898	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2CO_2H	OH, OH
2899	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	OH, OH
2900	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	OH, OH
2901	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2CN_4H	OH, OH
2902	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	OH, OH
2903	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	OH, OH
2904	$NH(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2NO_2	OH, OH

2905	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_2$NO$_2$	OH, OH
2906	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_3$NO$_2$	OH, OH
2907	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$OH	OH, OH
2908	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_2$OH	OH, OH
2909	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_3$OH	OH, OH
2910	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CO$_2$Me	OH, OH
2911	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_2$CO$_2$Me	OH, OH
2912	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_3$CO$_2$Me	OH, OH
2913	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	3-NO$_2$-Ph	OH, OH
2914	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	4-NO$_2$-Ph	OH, OH
2915	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	3-CO$_2$H-Ph	OH, OH
2916	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	4-CO$_2$H-Ph	OH, OH
2917	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	3-CN$_4$H-Ph	OH, OH
2918	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	4-CN$_4$H-Ph	OH, OH
2919	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	3-(HOCH$_2$)-Ph	OH, OH
2920	NH(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	4-(HOCH$_2$)-Ph	OH, OH
2921	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	H	(+)-pin
2922	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	Methyl	(+)-pin
2923	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	Ethyl	(+)-pin
2924	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	n-Propyl	(+)-pin
2925	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	n-Butyl	(+)-pin
2926	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$SCH$_3$	(+)-pin
2927	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$(SO)CH$_3$	(+)-pin
2928	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$(SO$_2$)CH$_3$	(+)-pin
2929	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CH$_2$SCH$_3$	(+)-pin
2930	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CH$_2$(SO)CH$_3$	(+)-pin
2931	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CH$_2$(SO)$_2$CH$_3$	(+)-pin
2932	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CN	(+)-pin
2933	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CH$_2$CN	(+)-pin
2934	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CH$_2$CH$_2$CN	(+)-pin
2935	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CF$_3$	(+)-pin
2936	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CF$_2$CF$_3$	(+)-pin
2937	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CF$_2$CF$_2$CF$_3$	(+)-pin
2938	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CF$_2$CF$_2$CF$_2$CF$_3$	(+)-pin
2939	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	F$_5$-Ph	(+)-pin
2940	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CO$_2$H	(+)-pin
2941	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_2$CO$_2$H	(+)-pin
2942	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_3$CO$_2$H	(+)-pin
2943	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	CH$_2$CN$_4$H	(+)-pin
2944	-S-(C=NH)NH$_2$	1	PhCH$_2$CH$_2$	(CH$_2$)$_2$CN$_4$H	(+)-pin

2945	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	(+)-pin
2946	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2NO_2	(+)-pin
2947	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	(+)-pin
2948	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	(+)-pin
2949	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2OH	(+)-pin
2950	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_2OH$	(+)-pin
2951	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_3OH$	(+)-pin
2952	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2CO_2Me	(+)-pin
2953	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	(+)-pin
2954	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	(+)-pin
2955	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$3-NO_2-Ph$	(+)-pin
2956	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$4-NO_2-Ph$	(+)-pin
2957	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$3-CO_2H-Ph$	(+)-pin
2958	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$4-CO_2H-Ph$	(+)-pin
2959	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$3-CN_4H-Ph$	(+)-pin
2960	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$4-CN_4H-Ph$	(+)-pin
2961	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$3-(HOCH_2)-Ph$	(+)-pin
2962	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$4-(HOCH_2)-Ph$	(+)-pin
2963	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	H	OH, OH
2964	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	Methyl	OH, OH
2965	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	Ethyl	OH, OH
2966	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	n-Propyl	OH, OH
2967	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	n-Butyl	OH, OH
2968	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2SCH_3	OH, OH
2969	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	OH, OH
2970	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	OH, OH
2971	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	OH, OH
2972	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	OH, OH
2973	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH
2974	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2CN	OH, OH
2975	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2CH_2CN	OH, OH
2976	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	OH, OH
2977	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CF_3	OH, OH
2978	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CF_2CF_3	OH, OH
2979	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	OH, OH
2980	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	OH, OH
2981	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	F_5-Ph	OH, OH
2982	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	CH_2CO_2H	OH, OH
2983	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	OH, OH
2984	$-S-(C{=}NH)NH_2$	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	OH, OH

2985	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2CN_4H	OH, OH
2986	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	OH, OH
2987	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	OH, OH
2988	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2NO_2	OH, OH
2989	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	OH, OH
2990	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	OH, OH
2991	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2OH	OH, OH
2992	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2OH$	OH, OH
2993	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3OH$	OH, OH
2994	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	CH_2CO_2Me	OH, OH
2995	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	OH, OH
2996	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	OH, OH
2997	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	3-NO_2-Ph	OH, OH
2998	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	4-NO_2-Ph	OH, OH
2999	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	3-CO_2H-Ph	OH, OH
3000	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	4-CO_2H-Ph	OH, OH
3001	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	3-CN_4H-Ph	OH, OH
3002	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	4-CN_4H-Ph	OH, OH
3003	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	3-($HOCH_2$)-Ph	OH, OH
3004	-S-(C=NH)NH_2	1	$PhCH_2CH_2$	4-($HOCH_2$)-Ph	OH, OH
3005	OMe	1	$PhCH_2CH_2$	H	(+)-pin
3006	OMe	1	$PhCH_2CH_2$	Methyl	(+)-pin
3007	OMe	1	$PhCH_2CH_2$	Ethyl	(+)-pin
3008	OMe	1	$PhCH_2CH_2$	n-Propyl	(+)-pin
3009	OMe	1	$PhCH_2CH_2$	n-Butyl	(+)-pin
3010	OMe	1	$PhCH_2CH_2$	CH_2SCH_3	(+)-pin
3011	OMe	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	(+)-pin
3012	OMe	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	(+)-pin
3013	OMe	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	(+)-pin
3014	OMe	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin
3015	OMe	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin
3016	OMe	1	$PhCH_2CH_2$	CH_2CN	(+)-pin
3017	OMe	1	$PhCH_2CH_2$	CH_2CH_2CN	(+)-pin
3018	OMe	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	(+)-pin
3019	OMe	1	$PhCH_2CH_2$	CF_3	(+)-pin
3020	OMe	1	$PhCH_2CH_2$	CF_2CF_3	(+)-pin
3021	OMe	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	(+)-pin
3022	OMe	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin
3023	OMe	1	$PhCH_2CH_2$	F_5-Ph	(+)-pin
3024	OMe	1	$PhCH_2CH_2$	CH_2CO_2H	(+)-pin

3025	OMe	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	(+)-pin
3026	OMe	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	(+)-pin
3027	OMe	1	$PhCH_2CH_2$	CH_2CN_4H	(+)-pin
3028	OMe	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	(+)-pin
3029	OMe	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	(+)-pin
3030	OMe	1	$PhCH_2CH_2$	CH_2NO_2	(+)-pin
3031	OMe	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	(+)-pin
3032	OMe	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	(+)-pin
3033	OMe	1	$PhCH_2CH_2$	CH_2OH	(+)-pin
3034	OMe	1	$PhCH_2CH_2$	$(CH_2)_2OH$	(+)-pin
3035	OMe	1	$PhCH_2CH_2$	$(CH_2)_3OH$	(+)-pin
3036	OMe	1	$PhCH_2CH_2$	CH_2CO_2Me	(+)-pin
3037	OMe	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	(+)-pin
3038	OMe	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	(+)-pin
3039	OMe	1	$PhCH_2CH_2$	$3-NO_2-Ph$	(+)-pin
3040	OMe	1	$PhCH_2CH_2$	$4-NO_2-Ph$	(+)-pin
3041	OMe	1	$PhCH_2CH_2$	$3-CO_2H-Ph$	(+)-pin
3042	OMe	1	$PhCH_2CH_2$	$4-CO_2H-Ph$	(+)-pin
3043	OMe	1	$PhCH_2CH_2$	$3-CN_4H-Ph$	(+)-pin
3044	OMe	1	$PhCH_2CH_2$	$4-CN_4H-Ph$	(+)-pin
3045	OMe	1	$PhCH_2CH_2$	$3-(HOCH_2)-Ph$	(+)-pin
3046	OMe	1	$PhCH_2CH_2$	$4-(HOCH_2)-Ph$	(+)-pin
3047	OMe	1	$PhCH_2CH_2$	H	OH, OH
3048	OMe	1	$PhCH_2CH_2$	Methyl	OH, OH
3049	OMe	1	$PhCH_2CH_2$	Ethyl	OH, OH
3050	OMe	1	$PhCH_2CH_2$	n-Propyl	OH, OH
3051	OMe	1	$PhCH_2CH_2$	n-Butyl	OH, OH
3052	OMe	1	$PhCH_2CH_2$	CH_2SCH_3	OH, OH
3053	OMe	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	OH, OH
3054	OMe	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	OH, OH
3055	OMe	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	OH, OH
3056	OMe	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	OH, OH
3057	OMe	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH
3058	OMe	1	$PhCH_2CH_2$	CH_2CN	OH, OH
3059	OMe	1	$PhCH_2CH_2$	CH_2CH_2CN	OH, OH
3060	OMe	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	OH, OH
3061	OMe	1	$PhCH_2CH_2$	CF_3	OH, OH
3062	OMe	1	$PhCH_2CH_2$	CF_2CF_3	OH, OH
3063	OMe	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	OH, OH
3064	OMe	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	OH, OH

3065	OMe	1	$PhCH_2CH_2$	F_5-Ph	OH, OH
3066	OMe	1	$PhCH_2CH_2$	CH_2CO_2H	OH, OH
3067	OMe	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	OH, OH
3068	OMe	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	OH, OH
3069	OMe	1	$PhCH_2CH_2$	CH_2CN_4H	OH, OH
3070	OMe	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	OH, OH
3071	OMe	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	OH, OH
3072	OMe	1	$PhCH_2CH_2$	CH_2NO_2	OH, OH
3073	OMe	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	OH, OH
3074	OMe	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	OH, OH
3075	OMe	1	$PhCH_2CH_2$	CH_2OH	OH, OH
3076	OMe	1	$PhCH_2CH_2$	$(CH_2)_2OH$	OH, OH
3077	OMe	1	$PhCH_2CH_2$	$(CH_2)_3OH$	OH, OH
3078	OMe	1	$PhCH_2CH_2$	CH_2CO_2Me	OH, OH
3079	OMe	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	OH, OH
3080	OMe	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	OH, OH
3081	OMe	1	$PhCH_2CH_2$	3-NO_2-Ph	OH, OH
3082	OMe	1	$PhCH_2CH_2$	4-NO_2-Ph	OH, OH
3083	OMe	1	$PhCH_2CH_2$	3-CO_2H-Ph	OH, OH
3084	OMe	1	$PhCH_2CH_2$	4-CO_2H-Ph	OH, OH
3085	OMe	1	$PhCH_2CH_2$	3-CN_4H-Ph	OH, OH
3086	OMe	1	$PhCH_2CH_2$	4-CN_4H-Ph	OH, OH
3087	OMe	1	$PhCH_2CH_2$	3-($HOCH_2$)-Ph	OH, OH
3088	OMe	1	$PhCH_2CH_2$	4-($HOCH_2$)-Ph	OH, OH
3089	NH(C=NH)H	1	Ph	H	(+)-pin
3090	NH(C=NH)H	1	Ph	Methyl	(+)-pin
3091	NH(C=NH)H	1	Ph	Ethyl	(+)-pin
3092	NH(C=NH)H	1	Ph	n-Propyl	(+)-pin
3093	NH(C=NH)H	1	Ph	n-Butyl	(+)-pin
3094	NH(C=NH)H	1	Ph	CH_2SCH_3	(+)-pin
3095	NH(C=NH)H	1	Ph	$CH_2(SO)CH_3$	(+)-pin
3096	NH(C=NH)H	1	Ph	$CH_2(SO_2)CH_3$	(+)-pin
3097	NH(C=NH)H	1	Ph	$CH_2CH_2SCH_3$	(+)-pin
3098	NH(C=NH)H	1	Ph	$CH_2CH_2(SO)CH_3$	(+)-pin
3099	NH(C=NH)H	1	Ph	$CH_2CH_2(SO)_2CH_3$	(+)-pin
3100	NH(C=NH)H	1	Ph	CH_2CN	(+)-pin
3101	NH(C=NH)H	1	Ph	CH_2CH_2CN	(+)-pin
3102	NH(C=NH)H	1	Ph	$CH_2CH_2CH_2CN$	(+)-pin
3103	NH(C=NH)H	1	Ph	CF_3	(+)-pin
3104	NH(C=NH)H	1	Ph	CF_2CF_3	(+)-pin

3105	NH(C=NH)H	1	Ph	$CF_2CF_2CF_3$	(+)-pin
3106	NH(C=NH)H	1	Ph	$CF_2CF_2CF_2CF_3$	(+)-pin
3107	NH(C=NH)H	1	Ph	F_5-Ph	(+)-pin
3108	NH(C=NH)H	1	Ph	CH_2CO_2H	(+)-pin
3109	NH(C=NH)H	1	Ph	$(CH_2)_2CO_2H$	(+)-pin
3110	NH(C=NH)H	1	Ph	$(CH_2)_3CO_2H$	(+)-pin
3111	NH(C=NH)H	1	Ph	CH_2CN_4H	(+)-pin
3112	NH(C=NH)H	1	Ph	$(CH_2)_2CN_4H$	(+)-pin
3113	NH(C=NH)H	1	Ph	$(CH_2)_3CN_4H$	(+)-pin
3114	NH(C=NH)H	1	Ph	CH_2NO_2	(+)-pin
3115	NH(C=NH)H	1	Ph	$(CH_2)_2NO_2$	(+)-pin
3116	NH(C=NH)H	1	Ph	$(CH_2)_3NO_2$	(+)-pin
3117	NH(C=NH)H	1	Ph	CH_2OH	(+)-pin
3118	NH(C=NH)H	1	Ph	$(CH_2)_2OH$	(+)-pin
3119	NH(C=NH)H	1	Ph	$(CH_2)_3OH$	(+)-pin
3120	NH(C=NH)H	1	Ph	CH_2CO_2Me	(+)-pin
3121	NH(C=NH)H	1	Ph	$(CH_2)_2CO_2Me$	(+)-pin
3122	NH(C=NH)H	1	Ph	$(CH_2)_3CO_2Me$	(+)-pin
3123	NH(C=NH)H	1	Ph	3-NO_2-Ph	(+)-pin
3124	NH(C=NH)H	1	Ph	4-NO_2-Ph	(+)-pin
3125	NH(C=NH)H	1	Ph	3-CO_2H-Ph	(+)-pin
3126	NH(C=NH)H	1	Ph	4-CO_2H-Ph	(+)-pin
3127	NH(C=NH)H	1	Ph	3-CN_4H-Ph	(+)-pin
3128	NH(C=NH)H	1	Ph	4-CN_4H-Ph	(+)-pin
3129	NH(C=NH)H	1	Ph	3-$(HOCH_2)$-Ph	(+)-pin
3130	NH(C=NH)H	1	Ph	4-$(HOCH_2)$-Ph	(+)-pin
3131	NH(C=NH)H	1	Ph	H	OH, OH
3132	NH(C=NH)H	1	Ph	Methyl	OH, OH
3133	NH(C=NH)H	1	Ph	Ethyl	OH, OH
3134	NH(C=NH)H	1	Ph	n-Propyl	OH, OH
3135	NH(C=NH)H	1	Ph	n-Butyl	OH, OH
3136	NH(C=NH)H	1	Ph	CH_2SCH_3	OH, OH
3137	NH(C=NH)H	1	Ph	$CH_2(SO)CH_3$	OH, OH
3138	NH(C=NH)H	1	Ph	$CH_2(SO_2)CH_3$	OH, OH
3139	NH(C=NH)H	1	Ph	$CH_2CH_2SCH_3$	OH, OH
3140	NH(C=NH)H	1	Ph	$CH_2CH_2(SO)CH_3$	OH, OH
3141	NH(C=NH)H	1	Ph	$CH_2CH_2(SO)_2CH_3$	OH, OH
3142	NH(C=NH)H	1	Ph	CH_2CN	OH, OH
3143	NH(C=NH)H	1	Ph	CH_2CH_2CN	OH, OH
3144	NH(C=NH)H	1	Ph	$CH_2CH_2CH_2CN$	OH, OH

3145	NH(C=NH)H	1	Ph	CF_3	OH, OH
3146	NH(C=NH)H	1	Ph	CF_2CF_3	OH, OH
3147	NH(C=NH)H	1	Ph	$CF_2CF_2CF_3$	OH, OH
3148	NH(C=NH)H	1	Ph	$CF_2CF_2CF_2CF_3$	OH, OH
3149	NH(C=NH)H	1	Ph	F_5-Ph	OH, OH
3150	NH(C=NH)H	1	Ph	CH_2CO_2H	OH, OH
3151	NH(C=NH)H	1	Ph	$(CH_2)_2CO_2H$	OH, OH
3152	NH(C=NH)H	1	Ph	$(CH_2)_3CO_2H$	OH, OH
3153	NH(C=NH)H	1	Ph	CH_2CN_4H	OH, OH
3154	NH(C=NH)H	1	Ph	$(CH_2)_2CN_4H$	OH, OH
3155	NH(C=NH)H	1	Ph	$(CH_2)_3CN_4H$	OH, OH
3156	NH(C=NH)H	1	Ph	CH_2NO_2	OH, OH
3157	NH(C=NH)H	1	Ph	$(CH_2)_2NO_2$	OH, OH
3158	NH(C=NH)H	1	Ph	$(CH_2)_3NO_2$	OH, OH
3159	NH(C=NH)H	1	Ph	CH_2OH	OH, OH
3160	NH(C=NH)H	1	Ph	$(CH_2)_2OH$	OH, OH
3161	NH(C=NH)H	1	Ph	$(CH_2)_3OH$	OH, OH
3162	NH(C=NH)H	1	Ph	CH_2CO_2Me	OH, OH
3163	NH(C=NH)H	1	Ph	$(CH_2)_2CO_2Me$	OH, OH
3164	NH(C=NH)H	1	Ph	$(CH_2)_3CO_2Me$	OH, OH
3165	NH(C=NH)H	1	Ph	3-NO_2-Ph	OH, OH
3166	NH(C=NH)H	1	Ph	4-NO_2-Ph	OH, OH
3167	NH(C=NH)H	1	Ph	3-CO_2H-Ph	OH, OH
3168	NH(C=NH)H	1	Ph	4-CO_2H-Ph	OH, OH
3169	NH(C=NH)H	1	Ph	3-CN_4H-Ph	OH, OH
3170	NH(C=NH)H	1	Ph	4-CN_4H-Ph	OH, OH
3171	NH(C=NH)H	1	Ph	3-($HOCH_2$)-Ph	OH, OH
3172	NH(C=NH)H	1	Ph	4-($HOCH_2$)-Ph	OH, OH
3173	NH(C=NH)H	1	$PhCH_2$	H	(+)-pin
3174	NH(C=NH)H	1	$PhCH_2$	Methyl	(+)-pin
3175	NH(C=NH)H	1	$PhCH_2$	Ethyl	(+)-pin
3176	NH(C=NH)H	1	$PhCH_2$	n-Propyl	(+)-pin
3177	NH(C=NH)H	1	$PhCH_2$	n-Butyl	(+)-pin
3178	NH(C=NH)H	1	$PhCH_2$	CH_2SCH_3	(+)-pin
3179	NH(C=NH)H	1	$PhCH_2$	$CH_2(SO)CH_3$	(+)-pin
3180	NH(C=NH)H	1	$PhCH_2$	$CH_2(SO_2)CH_3$	(+)-pin
3181	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2SCH_3$	(+)-pin
3182	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin
3183	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin
3184	NH(C=NH)H	1	$PhCH_2$	CH_2CN	(+)-pin

3185	NH(C=NH)H	1	$PhCH_2$	CH_2CH_2CN	(+)-pin
3186	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2CH_2CN$	(+)-pin
3187	NH(C=NH)H	1	$PhCH_2$	CF_3	(+)-pin
3188	NH(C=NH)H	1	$PhCH_2$	CF_2CF_3	(+)-pin
3189	NH(C=NH)H	1	$PhCH_2$	$CF_2CF_2CF_3$	(+)-pin
3190	NH(C=NH)H	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin
3191	NH(C=NH)H	1	$PhCH_2$	F_5-Ph	(+)-pin
3192	NH(C=NH)H	1	$PhCH_2$	CH_2CO_2H	(+)-pin
3193	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2CO_2H$	(+)-pin
3194	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3CO_2H$	(+)-pin
3195	NH(C=NH)H	1	$PhCH_2$	CH_2CN_4H	(+)-pin
3196	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2CN_4H$	(+)-pin
3197	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3CN_4H$	(+)-pin
3198	NH(C=NH)H	1	$PhCH_2$	CH_2NO_2	(+)-pin
3199	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2NO_2$	(+)-pin
3200	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3NO_2$	(+)-pin
3201	NH(C=NH)H	1	$PhCH_2$	CH_2OH	(+)-pin
3202	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
3203	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3OH$	(+)-pin
3204	NH(C=NH)H	1	$PhCH_2$	CH_2CO_2Me	(+)-pin
3205	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2CO_2Me$	(+)-pin
3206	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3CO_2Me$	(+)-pin
3207	NH(C=NH)H	1	$PhCH_2$	3-NO_2-Ph	(+)-pin
3208	NH(C=NH)H	1	$PhCH_2$	4-NO_2-Ph	(+)-pin
3209	NH(C=NH)H	1	$PhCH_2$	3-CO_2H-Ph	(+)-pin
3210	NH(C=NH)H	1	$PhCH_2$	4-CO_2H-Ph	(+)-pin
3211	NH(C=NH)H	1	$PhCH_2$	3-CN_4H-Ph	(+)-pin
3212	NH(C=NH)H	1	$PhCH_2$	4-CN_4H-Ph	(+)-pin
3213	NH(C=NH)H	1	$PhCH_2$	3-($HOCH_2$)-Ph	(+)-pin
3214	NH(C=NH)H	1	$PhCH_2$	4-($HOCH_2$)-Ph	(+)-pin
3215	NH(C=NH)H	1	$PhCH_2$	H	OH, OH
3216	NH(C=NH)H	1	$PhCH_2$	Methyl	OH, OH
3217	NH(C=NH)H	1	$PhCH_2$	Ethyl	OH, OH
3218	NH(C=NH)H	1	$PhCH_2$	n-Propyl	OH, OH
3219	NH(C=NH)H	1	$PhCH_2$	n-Butyl	OH, OH
3220	NH(C=NH)H	1	$PhCH_2$	CH_2SCH_3	OH, OH
3221	NH(C=NH)H	1	$PhCH_2$	$CH_2(SO)CH_3$	OH, OH
3222	NH(C=NH)H	1	$PhCH_2$	$CH_2(SO_2)CH_3$	OH, OH
3223	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2SCH_3$	OH, OH
3224	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2(SO)CH_3$	OH, OH

3225	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH
3226	NH(C=NH)H	1	$PhCH_2$	CH_2CN	OH, OH
3227	NH(C=NH)H	1	$PhCH_2$	CH_2CH_2CN	OH, OH
3228	NH(C=NH)H	1	$PhCH_2$	$CH_2CH_2CH_2CN$	OH, OH
3229	NH(C=NH)H	1	$PhCH_2$	CF_3	OH, OH
3230	NH(C=NH)H	1	$PhCH_2$	CF_2CF_3	OH, OH
3231	NH(C=NH)H	1	$PhCH_2$	$CF_2CF_2CF_3$	OH, OH
3232	NH(C=NH)H	1	$PhCH_2$	$CF_2CF_2CF_2CF_3$	OH, OH
3233	NH(C=NH)H	1	$PhCH_2$	F_5-Ph	OH, OH
3234	NH(C=NH)H	1	$PhCH_2$	CH_2CO_2H	OH, OH
3235	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2CO_2H$	OH, OH
3236	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3CO_2H$	OH, OH
3237	NH(C=NH)H	1	$PhCH_2$	CH_2CN_4H	OH, OH
3238	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2CN_4H$	OH, OH
3239	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3CN_4H$	OH, OH
3240	NH(C=NH)H	1	$PhCH_2$	CH_2NO_2	OH, OH
3241	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2NO_2$	OH, OH
3242	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3NO_2$	OH, OH
3243	NH(C=NH)H	1	$PhCH_2$	CH_2OH	OH, OH
3244	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2OH$	OH, OH
3245	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3OH$	OH, OH
3246	NH(C=NH)H	1	$PhCH_2$	CH_2CO_2Me	OH, OH
3247	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_2CO_2Me$	OH, OH
3248	NH(C=NH)H	1	$PhCH_2$	$(CH_2)_3CO_2Me$	OH, OH
3249	NH(C=NH)H	1	$PhCH_2$	3-NO_2-Ph	OH, OH
3250	NH(C=NH)H	1	$PhCH_2$	4-NO_2-Ph	OH, OH
3251	NH(C=NH)H	1	$PhCH_2$	3-CO_2H-Ph	OH, OH
3252	NH(C=NH)H	1	$PhCH_2$	4-CO_2H-Ph	OH, OH
3253	NH(C=NH)H	1	$PhCH_2$	3-CN_4H-Ph	OH, OH
3254	NH(C=NH)H	1	$PhCH_2$	4-CN_4H-Ph	OH, OH
3255	NH(C=NH)H	1	$PhCH_2$	3-($HOCH_2$)-Ph	OH, OH
3256	NH(C=NH)H	1	$PhCH_2$	4-($HOCH_2$)-Ph	OH, OH
3257	NH(C=NH)H	1	$PhCH_2CH_2$	H	(+)-pin
3258	NH(C=NH)H	1	$PhCH_2CH_2$	Methyl	(+)-pin
3259	NH(C=NH)H	1	$PhCH_2CH_2$	Ethyl	(+)-pin
3260	NH(C=NH)H	1	$PhCH_2CH_2$	n-Propyl	(+)-pin
3261	NH(C=NH)H	1	$PhCH_2CH_2$	n-Butyl	(+)-pin
3262	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2SCH_3	(+)-pin
3263	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	(+)-pin
3264	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	(+)-pin

3265	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	(+)-pin
3266	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	(+)-pin
3267	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	(+)-pin
3268	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CN	(+)-pin
3269	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CH_2CN	(+)-pin
3270	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	(+)-pin
3271	NH(C=NH)H	1	$PhCH_2CH_2$	CF_3	(+)-pin
3272	NH(C=NH)H	1	$PhCH_2CH_2$	CF_2CF_3	(+)-pin
3273	NH(C=NH)H	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	(+)-pin
3274	NH(C=NH)H	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	(+)-pin
3275	NH(C=NH)H	1	$PhCH_2CH_2$	F_5-Ph	(+)-pin
3276	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CO_2H	(+)-pin
3277	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	(+)-pin
3278	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	(+)-pin
3279	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CN_4H	(+)-pin
3280	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	(+)-pin
3281	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	(+)-pin
3282	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2NO_2	(+)-pin
3283	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	(+)-pin
3284	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	(+)-pin
3285	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2OH	(+)-pin
3286	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2OH$	(+)-pin
3287	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3OH$	(+)-pin
3288	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CO_2Me	(+)-pin
3289	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	(+)-pin
3290	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	(+)-pin
3291	NH(C=NH)H	1	$PhCH_2CH_2$	3-NO_2-Ph	(+)-pin
3292	NH(C=NH)H	1	$PhCH_2CH_2$	4-NO_2-Ph	(+)-pin
3293	NH(C=NH)H	1	$PhCH_2CH_2$	3-CO_2H-Ph	(+)-pin
3294	NH(C=NH)H	1	$PhCH_2CH_2$	4-CO_2H-Ph	(+)-pin
3295	NH(C=NH)H	1	$PhCH_2CH_2$	3-CN_4H-Ph	(+)-pin
3296	NH(C=NH)H	1	$PhCH_2CH_2$	4-CN_4H-Ph	(+)-pin
3297	NH(C=NH)H	1	$PhCH_2CH_2$	3-($HOCH_2$)-Ph	(+)-pin
3298	NH(C=NH)H	1	$PhCH_2CH_2$	4-($HOCH_2$)-Ph	(+)-pin
3299	NH(C=NH)H	1	$PhCH_2CH_2$	H	OH, OH
3300	NH(C=NH)H	1	$PhCH_2CH_2$	Methyl	OH, OH
3301	NH(C=NH)H	1	$PhCH_2CH_2$	Ethyl	OH, OH
3302	NH(C=NH)H	1	$PhCH_2CH_2$	n-Propyl	OH, OH
3303	NH(C=NH)H	1	$PhCH_2CH_2$	n-Butyl	OH, OH
3304	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2SCH_3	OH, OH

3305	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2(SO)CH_3$	OH, OH
3306	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2(SO_2)CH_3$	OH, OH
3307	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2SCH_3$	OH, OH
3308	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2(SO)CH_3$	OH, OH
3309	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2(SO)_2CH_3$	OH, OH
3310	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CN	OH, OH
3311	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CH_2CN	OH, OH
3312	NH(C=NH)H	1	$PhCH_2CH_2$	$CH_2CH_2CH_2CN$	OH, OH
3313	NH(C=NH)H	1	$PhCH_2CH_2$	CF_3	OH, OH
3314	NH(C=NH)H	1	$PhCH_2CH_2$	CF_2CF_3	OH, OH
3315	NH(C=NH)H	1	$PhCH_2CH_2$	$CF_2CF_2CF_3$	OH, OH
3316	NH(C=NH)H	1	$PhCH_2CH_2$	$CF_2CF_2CF_2CF_3$	OH, OH
3317	NH(C=NH)H	1	$PhCH_2CH_2$	F_5-Ph	OH, OH
3318	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CO_2H	OH, OH
3319	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2CO_2H$	OH, OH
3320	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3CO_2H$	OH, OH
3321	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CN_4H	OH, OH
3322	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2CN_4H$	OH, OH
3323	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3CN_4H$	OH, OH
3324	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2NO_2	OH, OH
3325	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2NO_2$	OH, OH
3326	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3NO_2$	OH, OH
3327	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2OH	OH, OH
3328	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2OH$	OH, OH
3329	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3OH$	OH, OH
3330	NH(C=NH)H	1	$PhCH_2CH_2$	CH_2CO_2Me	OH, OH
3331	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_2CO_2Me$	OH, OH
3332	NH(C=NH)H	1	$PhCH_2CH_2$	$(CH_2)_3CO_2Me$	OH, OH
3333	NH(C=NH)H	1	$PhCH_2CH_2$	3-NO_2-Ph	OH, OH
3334	NH(C=NH)H	1	$PhCH_2CH_2$	4-NO_2-Ph	OH, OH
3335	NH(C=NH)H	1	$PhCH_2CH_2$	3-CO_2H-Ph	OH, OH
3336	NH(C=NH)H	1	$PhCH_2CH_2$	4-CO_2H-Ph	OH, OH
3337	NH(C=NH)H	1	$PhCH_2CH_2$	3-CN_4H-Ph	OH, OH
3338	NH(C=NH)H	1	$PhCH_2CH_2$	4-CN_4H-Ph	OH, OH
3339	NH(C=NH)H	1	$PhCH_2CH_2$	3-$(HOCH_2)$-Ph	OH, OH
3340	NH(C=NH)H	1	$PhCH_2CH_2$	4-$(HOCH_2)$-Ph	OH, OH

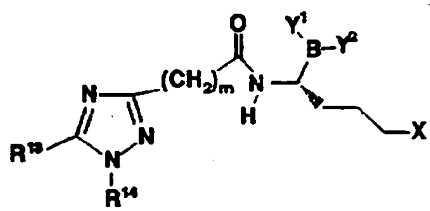
BA. MS $(M+H)^+$: Calc. 480, Found 480.

BC. MS $(M+H)^+$: Calc. 494, Found 494.

BD. MS $(M+H)^+$: Calc. 522, Found 522.

BE. MS $(M+H)^+$: Calc. 540, Found 540.
BF. MS $(M+H)^+$: Calc. 519, Found 519.
BG. MS $(M+H)^+$: Calc. 538, Found 538.
BH. MS $(M+H)^+$: Calc. 346, Found 346.
BI. MS $(M+H)^+$: Calc. 494, Found 494.
BJ. Anal. calcd. for $C_{17}H_{26}BN_5O_3 \cdot 2\ H_2O \cdot 1.8\ HCl$: C, 44.30; H, 6.95; Cl, 13.84; N, 15.20. Found: C, 44.22; H, 6.66; Cl, 14.03; N, 14.03.
BW. MS $(M+H)^+$: Calc. 466, Found 466.
BX. MS $(M+H)^+$: Calc. 480, Found 480.
CV. MS $(M+H)^+$: Calc. 510, Found 510.
CW. MS $(M+H)^+$: Calc. 600, Found 600.
CX. MS $(M+H)^+$: Calc. 552, Found 552.
CY. MS $(M+H)^+$: Calc. 629, Found 629.
CZ. MS $(M+H)^+$: Calc. 524, Found 524.
DA. MS $(M+H)^+$: Calc. 614, Found 614.

Table 16



Ex	X	m	R^{13}	R^{14}	Y^1Y^2	Phys. Data
3345	CH_2NH_2	1	Ph	Ph	(+)-pin	
3346	CH_2NH_2	1	Ph	$PhCH_2$	(+)-pin	
3347	CH_2NH_2	1	Ph	$Ph(CH_2)_2$	(+)-pin	
3348	CH_2NH_2	1	$PhCH_2$	Ph	(+)-pin	
3349	CH_2NH_2	1	$PhCH_2$	$PhCH_2$	(+)-pin	BY
3350	CH_2NH_2	1	$PhCH_2$	$Ph(CH_2)_2$	(+)-pin	
3351	CH_2NH_2	1	$Ph(CH_2)_2$	Ph	(+)-pin	
3352	CH_2NH_2	1	$Ph(CH_2)_2$	$PhCH_2$	(+)-pin	
3353	CH_2NH_2	1	$Ph(CH_2)_2$	$Ph(CH_2)_2$	(+)-pin	
3354	CH_2NH_2	1	Ph	Ph	OH, OH	
3355	CH_2NH_2	1	Ph	$PhCH_2$	OH, OH	
3356	CH_2NH_2	1	Ph	$Ph(CH_2)_2$	OH, OH	
3357	CH_2NH_2	1	$PhCH_2$	Ph	OH, OH	
3358	CH_2NH_2	1	$PhCH_2$	$PhCH_2$	OH, OH	

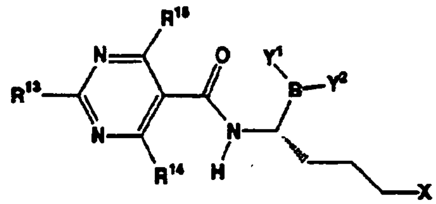
3359	CH_2NH_2	1	$PhCH_2$	$Ph(CH_2)_2$	OH, OH
3360	CH_2NH_2	1	$Ph(CH_2)_2$	Ph	OH, OH
3361	CH_2NH_2	1	$Ph(CH_2)_2$	$PhCH_2$	OH, OH
3362	CH_2NH_2	1	$Ph(CH_2)_2$	$Ph(CH_2)_2$	OH, OH
3363	$NH(C{=}NH)NH_2$	1	Ph	Ph	(+)-pin
3364	$NH(C{=}NH)NH_2$	1	Ph	$PhCH_2$	(+)-pin
3365	$NH(C{=}NH)NH_2$	1	Ph	$Ph(CH_2)_2$	(+)-pin
3366	$NH(C{=}NH)NH_2$	1	$PhCH_2$	Ph	(+)-pin
3367	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$PhCH_2$	(+)-pin
3368	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$Ph(CH_2)_2$	(+)-pin
3369	$NH(C{=}NH)NH_2$	1	$Ph(CH_2)_2$	Ph	(+)-pin
3370	$NH(C{=}NH)NH_2$	1	$Ph(CH_2)_2$	$PhCH_2$	(+)-pin
3371	$NH(C{=}NH)NH_2$	1	$Ph(CH_2)_2$	$Ph(CH_2)_2$	(+)-pin
3372	$NH(C{=}NH)NH_2$	1	Ph	Ph	OH, OH
3373	$NH(C{=}NH)NH_2$	1	Ph	$PhCH_2$	OH, OH
3374	$NH(C{=}NH)NH_2$	1	Ph	$Ph(CH_2)_2$	OH, OH
3375	$NH(C{=}NH)NH_2$	1	$PhCH_2$	Ph	OH, OH
3376	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$PhCH_2$	OH, OH
3377	$NH(C{=}NH)NH_2$	1	$PhCH_2$	$Ph(CH_2)_2$	OH, OH
3378	$NH(C{=}NH)NH_2$	1	$Ph(CH_2)_2$	Ph	OH, OH
3379	$NH(C{=}NH)NH_2$	1	$Ph(CH_2)_2$	$PhCH_2$	OH, OH
3380	$NH(C{=}NH)NH_2$	1	$Ph(CH_2)_2$	$Ph(CH_2)_2$	OH, OH
3381	OMe	1	Ph	Ph	(+)-pin
3382	OMe	1	Ph	$PhCH_2$	(+)-pin
3383	OMe	1	Ph	$Ph(CH_2)_2$	(+)-pin
3384	OMe	1	$PhCH_2$	Ph	(+)-pin
3385	OMe	1	$PhCH_2$	$PhCH_2$	(+)-pin
3386	OMe	1	$PhCH_2$	$Ph(CH_2)_2$	(+)-pin
3387	OMe	1	$Ph(CH_2)_2$	Ph	(+)-pin
3388	OMe	1	$Ph(CH_2)_2$	$PhCH_2$	(+)-pin
3389	OMe	1	$Ph(CH_2)_2$	$Ph(CH_2)_2$	(+)-pin
3390	OMe	1	Ph	Ph	OH, OH
3391	OMe	1	Ph	$PhCH_2$	OH, OH
3392	OMe	1	Ph	$Ph(CH_2)_2$	OH, OH
3393	OMe	1	$PhCH_2$	Ph	OH, OH
3394	OMe	1	$PhCH_2$	$PhCH_2$	OH, OH
3395	OMe	1	$PhCH_2$	$Ph(CH_2)_2$	OH, OH
3396	OMe	1	$Ph(CH_2)_2$	Ph	OH, OH
3397	OMe	1	$Ph(CH_2)_2$	$PhCH_2$	OH, OH
3398	OMe	1	$Ph(CH_2)_2$	$Ph(CH_2)_2$	OH, OH

3399	NH(C=NH)H	1	Ph	Ph	(+)-pin
3400	NH(C=NH)H	1	Ph	$PhCH_2$	(+)-pin
3401	NH(C=NH)H	1	Ph	$Ph(CH_2)_2$	(+)-pin
3402	NH(C=NH)H	1	$PhCH_2$	Ph	(+)-pin
3403	NH(C=NH)H	1	$PhCH_2$	$PhCH_2$	(+)-pin
3404	NH(C=NH)H	1	$PhCH_2$	$Ph(CH_2)_2$	(+)-pin
3405	NH(C=NH)H	1	$Ph(CH_2)_2$	Ph	(+)-pin
3406	NH(C=NH)H	1	$Ph(CH_2)_2$	$PhCH_2$	(+)-pin
3407	NH(C=NH)H	1	$Ph(CH_2)_2$	$Ph(CH_2)_2$	(+)-pin
3408	NH(C=NH)H	1	Ph	Ph	OH, OH
3409	NH(C=NH)H	1	Ph	$PhCH_2$	OH, OH
3410	NH(C=NH)H	1	Ph	$Ph(CH_2)_2$	OH, OH
3411	NH(C=NH)H	1	$PhCH_2$	Ph	OH, OH
3412	NH(C=NH)H	1	$PhCH_2$	$PhCH_2$	OH, OH
3413	NH(C=NH)H	1	$PhCH_2$	$Ph(CH_2)_2$	OH, OH
3414	NH(C=NH)H	1	$Ph(CH_2)_2$	Ph	OH, OH
3415	NH(C=NH)H	1	$Ph(CH_2)_2$	$PhCH_2$	OH, OH
3416	NH(C=NH)H	1	$Ph(CH_2)_2$	$Ph(CH_2)_2$	OH, OH
3417	CH_2NH_2	2	Ph	Ph	(+)-pin
3418	CH_2NH_2	2	Ph	$PhCH_2$	(+)-pin
3419	CH_2NH_2	2	Ph	$Ph(CH_2)_2$	(+)-pin
3420	CH_2NH_2	2	$PhCH_2$	Ph	(+)-pin
3421	CH_2NH_2	2	$PhCH_2$	$PhCH_2$	(+)-pin
3422	CH_2NH_2	2	$PhCH_2$	$Ph(CH_2)_2$	(+)-pin
3423	CH_2NH_2	2	$Ph(CH_2)_2$	Ph	(+)-pin
3424	CH_2NH_2	2	$Ph(CH_2)_2$	$PhCH_2$	(+)-pin
3425	CH_2NH_2	2	$Ph(CH_2)_2$	$Ph(CH_2)_2$	(+)-pin
3426	CH_2NH_2	2	Ph	Ph	OH, OH
3427	CH_2NH_2	2	Ph	$PhCH_2$	OH, OH
3428	CH_2NH_2	2	Ph	$Ph(CH_2)_2$	OH, OH
3429	CH_2NH_2	2	$PhCH_2$	Ph	OH, OH
3430	CH_2NH_2	2	$PhCH_2$	$PhCH_2$	OH, OH
3431	CH_2NH_2	2	$PhCH_2$	$Ph(CH_2)_2$	OH, OH
3432	CH_2NH_2	2	$Ph(CH_2)_2$	Ph	OH, OH
3433	CH_2NH_2	2	$Ph(CH_2)_2$	$PhCH_2$	OH, OH
3434	CH_2NH_2	2	$Ph(CH_2)_2$	$Ph(CH_2)_2$	OH, OH
3435	$NH(C=NH)NH_2$	2	Ph	Ph	(+)-pin
3436	$NH(C=NH)NH_2$	2	Ph	$PhCH_2$	(+)-pin
3437	$NH(C=NH)NH_2$	2	Ph	$Ph(CH_2)_2$	(+)-pin
3438	$NH(C=NH)NH_2$	2	$PhCH_2$	Ph	(+)-pin

3439	NH(C=NH)NH_2	2	$PhCH_2$	$PhCH_2$	(+)-pin
3440	NH(C=NH)NH_2	2	$PhCH_2$	$Ph(CH_2)_2$	(+)-pin
3441	NH(C=NH)NH_2	2	$Ph(CH_2)_2$	Ph	(+)-pin
3442	NH(C=NH)NH_2	2	$Ph(CH_2)_2$	$PhCH_2$	(+)-pin
3443	NH(C=NH)NH_2	2	$Ph(CH_2)_2$	$Ph(CH_2)_2$	(+)-pin
3444	NH(C=NH)NH_2	2	Ph	Ph	OH, OH
3445	NH(C=NH)NH_2	2	Ph	$PhCH_2$	OH, OH
3446	NH(C=NH)NH_2	2	Ph	$Ph(CH_2)_2$	OH, OH
3447	NH(C=NH)NH_2	2	$PhCH_2$	Ph	OH, OH
3448	NH(C=NH)NH_2	2	$PhCH_2$	$PhCH_2$	OH, OH
3449	NH(C=NH)NH_2	2	$PhCH_2$	$Ph(CH_2)_2$	OH, OH
3450	NH(C=NH)NH_2	2	$Ph(CH_2)_2$	Ph	OH, OH
3451	NH(C=NH)NH_2	2	$Ph(CH_2)_2$	$PhCH_2$	OH, OH
3452	NH(C=NH)NH_2	2	$Ph(CH_2)_2$	$Ph(CH_2)_2$	OH, OH

BY. MS $(M+H)^+$: Calc. 570, Found 570.

Table 17



Ex	X	R^{13}	R^{14}	R^{15}	Y^1Y^2	Phys Data
3457	CH_2NH_2	Ph	H	H	(+)-pin	
3458	CH_2NH_2	Ph	methyl	H	(+)-pin	BK
3459	CH_2NH_2	Ph	methyl	H	(+)-pin	
3460	CH_2NH_2	Ph	methyl	methyl	(+)-pin	
3461	CH_2NH_2	Ph	ethyl	H	(+)-pin	
3462	CH_2NH_2	Ph	ethyl	methyl	(+)-pin	
3463	CH_2NH_2	Ph	ethyl	ethyl	(+)-pin	
3464	CH_2NH_2	Ph	isopropyl	H	(+)-pin	
3465	CH_2NH_2	Ph	phenyl	H	(+)-pin	BL
3466	CH_2NH_2	Ph	CH_2CN	H	(+)-pin	
3467	CH_2NH_2	Ph	CH_2NC	H	(+)-pin	
3468	CH_2NH_2	Ph	CH_2NO_2	H	(+)-pin	
3469	CH_2NH_2	Ph	CH_2SCH_3	H	(+)-pin	
3470	CH_2NH_2	Ph	CH_2SOCH_3	H	(+)-pin	
3471	CH_2NH_2	Ph	$CH_2SO_2CH_3$	H	(+)-pin	
3472	CH_2NH_2	Ph	CH_2OH	H	(+)-pin	
3473	CH_2NH_2	Ph	CH_2COOH	H	(+)-pin	
3474	CH_2NH_2	Ph	$(CH_2)_2COOH$	H	(+)-pin	
3475	CH_2NH_2	Ph	$(CH_2)_2CN$	H	(+)-pin	
3476	CH_2NH_2	Ph	CH=CHCOOMe	H	(+)-pin	
3477	CH_2NH_2	Ph	CH=CHCOOH	H	(+)-pin	
3478	CH_2NH_2	Ph	CH=CHCN	H	(+)-pin	
3479	CH_2NH_2	Ph	CH_2CN_4H	H	(+)-pin	
3480	CH_2NH_2	Ph	$CH_2NHSO_2CF_3$	H	(+)-pin	
3481	CH_2NH_2	Ph	CH_2CH_2CN	H	(+)-pin	
3482	CH_2NH_2	Ph	CH_2CH_2NC	H	(+)-pin	
3483	CH_2NH_2	Ph	$CH_2CH_2NO_2$	H	(+)-pin	
3484	CH_2NH_2	Ph	$CH_2CH_2SCH_3$	H	(+)-pin	
3485	CH_2NH_2	Ph	$CH_2CH_2SOCH_3$	H	(+)-pin	
3486	CH_2NH_2	Ph	$CH_2CH_2SO_2CH_3$	H	(+)-pin	
3487	CH_2NH_2	Ph	CH_2CH_2OH	H	(+)-pin	

3488	CH_2NH_2	Ph	NO_2	H	(+)-pin
3489	CH_2NH_2	Ph	F	H	(+)-pin
3490	CH_2NH_2	Ph	OH	H	(+)-pin
3491	CH_2NH_2	Ph	H	H	OH, OH
3492	CH_2NH_2	Ph	methyl	H	OH, OH
3493	CH_2NH_2	Ph	methyl	methyl	OH, OH
3494	CH_2NH_2	Ph	ethyl	H	OH, OH
3495	CH_2NH_2	Ph	ethyl	methyl	OH, OH
3496	CH_2NH_2	Ph	ethyl	ethyl	OH, OH
3497	CH_2NH_2	Ph	isopropyl	H	OH, OH
3498	CH_2NH_2	Ph	phenyl	H	OH, OH
3499	CH_2NH_2	Ph	CH_2CN	H	OH, OH
3500	CH_2NH_2	Ph	CH_2NC	H	OH, OH
3501	CH_2NH_2	Ph	CH_2NO_2	H	OH, OH
3502	CH_2NH_2	Ph	CH_2SCH_3	H	OH, OH
3503	CH_2NH_2	Ph	CH_2SOCH_3	H	OH, OH
3504	CH_2NH_2	Ph	$CH_2SO_2CH_3$	H	OH, OH
3505	CH_2NH_2	Ph	CH_2OH	H	OH, OH
3506	CH_2NH_2	Ph	CH_2COOH	H	OH, OH
3507	CH_2NH_2	Ph	$(CH_2)_2COOH$	H	OH, OH
3508	CH_2NH_2	Ph	$(CH_2)_2CN$	H	OH, OH
3509	CH_2NH_2	Ph	CH=CHCOOMe	H	OH, OH
3510	CH_2NH_2	Ph	CH=CHCOOH	H	OH, OH
3511	CH_2NH_2	Ph	CH_2CN_4H	H	OH, OH
3512	CH_2NH_2	Ph	$CH_2NHSO_2CF_3$	H	OH, OH
3513	CH_2NH_2	Ph	CH_2CH_2CN	H	OH, OH
3514	CH_2NH_2	Ph	CH_2CH_2NC	H	OH, OH
3515	CH_2NH_2	Ph	$CH_2CH_2NO_2$	H	OH, OH
3516	CH_2NH_2	Ph	$CH_2CH_2SCH_3$	H	OH, OH
3517	CH_2NH_2	Ph	$CH_2CH_2SOCH_3$	H	OH, OH
3518	CH_2NH_2	Ph	$CH_2CH_2SO_2CH_3$	H	OH, OH
3519	CH_2NH_2	Ph	CH_2CH_2OH	H	OH, OH
3520	CH_2NH_2	Ph	CH_2CH_2COOH	H	OH, OH
3521	CH_2NH_2	Ph	$CH_2CH_2CN_4H$	H	OH, OH
3522	CH_2NH_2	Ph	$CH_2CH_2NHSO_2CF_3$	H	OH, OH
3523	CH_2NH_2	$PhCH_2$	H	H	(+)-pin
3524	CH_2NH_2	PhO	methyl	H	(+)-pin
3525	CH_2NH_2	PhS	methyl	methyl	(+)-pin
3526	CH_2NH_2	PhNH	ethyl	H	(+)-pin
3527	CH_2NH_2	PhCONH	ethyl	methyl	(+)-pin

3528	CH_2NH_2	PhNHCO	ethyl	ethyl	(+)-pin	
3529	CH_2NH_2	Ph	isopropyl	H	(+)-pin	
3530	CH_2NH_2	$PhCH_2$	phenyl	H	(+)-pin	
3531	CH_2NH_2	PhO	CH_2CN	H	(+)-pin	
3532	CH_2NH_2	PhS	CH_2NC	H	(+)-pin	
3533	CH_2NH_2	PhNH	CH_2NO_2	H	(+)-pin	
3534	CH_2NH_2	PhCONH	CH_2SCH_3	H	(+)-pin	
3535	CH_2NH_2	PhNHCO	CH_2SOCH_3	H	(+)-pin	
3536	CH_2NH_2	$Ph(CH_2)_2$	$CH_2SO_2CH_3$	H	(+)-pin	
3537	$NH(C{=}NH)NH_2$	Ph	H	H	(+)-pin	
3538	$NH(C{=}NH)NH_2$	Ph	methyl	H	(+)-pin	BM
3539	$NH(C{=}NH)NH_2$	Ph	methyl	H	(+)-pin	
3540	$NH(C{=}NH)NH_2$	Ph	methyl	methyl	(+)-pin	
3541	$NH(C{=}NH)NH_2$	Ph	ethyl	H	(+)-pin	
3542	$NH(C{=}NH)NH_2$	Ph	ethyl	methyl	(+)-pin	
3543	$NH(C{=}NH)NH_2$	Ph	ethyl	ethyl	(+)-pin	
3544	$NH(C{=}NH)NH_2$	Ph	isopropyl	H	(+)-pin	
3545	$NH(C{=}NH)NH_2$	Ph	phenyl	H	(+)-pin	
3546	$NH(C{=}NH)NH_2$	Ph	CH_2CN	H	(+)-pin	
3547	$NH(C{=}NH)NH_2$	Ph	CH_2NC	H	(+)-pin	
3548	$NH(C{=}NH)NH_2$	Ph	CH_2NO_2	H	(+)-pin	
3549	$NH(C{=}NH)NH_2$	Ph	CH_2SCH_3	H	(+)-pin	
3550	$NH(C{=}NH)NH_2$	Ph	CH_2SOCH_3	H	(+)-pin	
3551	$NH(C{=}NH)NH_2$	Ph	$CH_2SO_2CH_3$	H	(+)-pin	
3552	$NH(C{=}NH)NH_2$	Ph	CH_2OH	H	(+)-pin	
3553	$NH(C{=}NH)NH_2$	Ph	CH_2COOH	H	(+)-pin	
3554	$NH(C{=}NH)NH_2$	Ph	$(CH_2)_2COOH$	H	(+)-pin	
3555	$NH(C{=}NH)NH_2$	Ph	$(CH_2)_2CN$	H	(+)-pin	
3556	$NH(C{=}NH)NH_2$	Ph	$CH{=}CHCOOMe$	H	(+)-pin	
3557	$NH(C{=}NH)NH_2$	Ph	$CH{=}CHCOOH$	H	(+)-pin	
3558	$NH(C{=}NH)NH_2$	Ph	CH_2CN_4H	H	(+)-pin	
3559	$NH(C{=}NH)NH_2$	Ph	$CH_2NHSO_2CF_3$	H	(+)-pin	
3560	$NH(C{=}NH)NH_2$	Ph	CH_2CH_2CN	H	(+)-pin	
3561	$NH(C{=}NH)NH_2$	Ph	CH_2CH_2NC	H	(+)-pin	
3562	$NH(C{=}NH)NH_2$	Ph	$CH_2CH_2NO_2$	H	(+)-pin	
3563	$NH(C{=}NH)NH_2$	Ph	$CH_2CH_2SCH_3$	H	(+)-pin	
3564	$NH(C{=}NH)NH_2$	Ph	$CH_2CH_2SOCH_3$	H	(+)-pin	
3565	$NH(C{=}NH)NH_2$	Ph	$CH_2CH_2SO_2CH_3$	H	(+)-pin	
3566	$NH(C{=}NH)NH_2$	Ph	CH_2CH_2OH	H	(+)-pin	
3567	$NH(C{=}NH)NH_2$	Ph	NO_2	H	(+)-pin	

3568	NH(C=NH)NH$_2$	Ph	F	H	(+)-pin
3569	NH(C=NH)NH$_2$	Ph	OH	H	(+)-pin
3570	NH(C=NH)NH$_2$	Ph	H	H	OH, OH
3571	NH(C=NH)NH$_2$	Ph	methyl	H	OH, OH
3572	NH(C=NH)NH$_2$	Ph	methyl	methyl	OH, OH
3573	NH(C=NH)NH$_2$	Ph	ethyl	H	OH, OH
3574	NH(C=NH)NH$_2$	Ph	ethyl	methyl	OH, OH
3575	NH(C=NH)NH$_2$	Ph	ethyl	ethyl	OH, OH
3576	NH(C=NH)NH$_2$	Ph	isopropyl	H	OH, OH
3577	NH(C=NH)NH$_2$	Ph	phenyl	H	OH, OH
3578	NH(C=NH)NH$_2$	Ph	CH$_2$CN	H	OH, OH
3579	NH(C=NH)NH$_2$	Ph	CH$_2$NC	H	OH, OH
3580	NH(C=NH)NH$_2$	Ph	CH$_2$NO$_2$	H	OH, OH
3581	NH(C=NH)NH$_2$	Ph	CH$_2$SCH$_3$	H	OH, OH
3582	NH(C=NH)NH$_2$	Ph	CH$_2$SOCH$_3$	H	OH, OH
3583	NH(C=NH)NH$_2$	Ph	CH$_2$SO$_2$CH$_3$	H	OH, OH
3584	NH(C=NH)NH$_2$	Ph	CH$_2$OH	H	OH, OH
3585	NH(C=NH)NH$_2$	Ph	CH$_2$COOH	H	OH, OH
3586	NH(C=NH)NH$_2$	Ph	(CH$_2$)$_2$COOH	H	OH, OH
3587	NH(C=NH)NH$_2$	Ph	(CH$_2$)$_2$CN	H	OH, OH
3588	NH(C=NH)NH$_2$	Ph	CH=CHCOOMe	H	OH, OH
3589	NH(C=NH)NH$_2$	Ph	CH=CHCOOH	H	OH, OH
3590	NH(C=NH)NH$_2$	Ph	CH$_2$CN$_4$H	H	OH, OH
3591	NH(C=NH)NH$_2$	Ph	CH$_2$NHSO$_2$CF$_3$	H	OH, OH
3592	NH(C=NH)NH$_2$	Ph	CH$_2$CH$_2$CN	H	OH, OH
3593	NH(C=NH)NH$_2$	Ph	CH$_2$CH$_2$NC	H	OH, OH
3594	NH(C=NH)NH$_2$	Ph	CH$_2$CH$_2$NO$_2$	H	OH, OH
3595	NH(C=NH)NH$_2$	Ph	CH$_2$CH$_2$SCH$_3$	H	OH, OH
3596	NH(C=NH)NH$_2$	Ph	CH$_2$CH$_2$SOCH$_3$	H	OH, OH
3597	NH(C=NH)NH$_2$	Ph	CH$_2$CH$_2$SO$_2$CH$_3$	H	OH, OH
3598	NH(C=NH)NH$_2$	Ph	CH$_2$CH$_2$OH	H	OH, OH
3599	NH(C=NH)NH$_2$	Ph	CH$_2$CH$_2$COOH	H	OH, OH
3600	NH(C=NH)NH$_2$	Ph	CH$_2$CH$_2$CN$_4$H	H	OH, OH
3601	NH(C=NH)NH$_2$	Ph	CH$_2$CH$_2$NHSO$_2$CF$_3$	H	OH, OH
3602	NH(C=NH)NH$_2$	PhCH$_2$	H	H	(+)-pin
3603	NH(C=NH)NH$_2$	PhO	methyl	H	(+)-pin
3604	NH(C=NH)NH$_2$	PhS	methyl	methyl	(+)-pin
3605	NH(C=NH)NH$_2$	PhNH	ethyl	H	(+)-pin
3606	NH(C=NH)NH$_2$	PhCONH	ethyl	methyl	(+)-pin
3607	NH(C=NH)NH$_2$	PhNHCO	ethyl	ethyl	(+)-pin

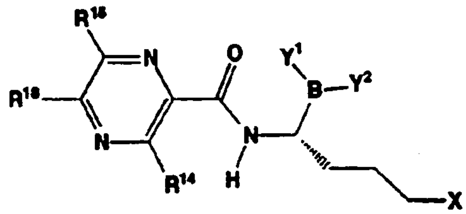
3608	NH(C=NH)NH_2	Ph	isopropyl	H	(+)-pin
3609	NH(C=NH)NH_2	$PhCH_2$	phenyl	H	(+)-pin
3610	NH(C=NH)NH_2	PhO	CH_2CN	H	(+)-pin
3611	NH(C=NH)NH_2	PhS	CH_2NC	H	(+)-pin
3612	NH(C=NH)NH_2	PhNH	CH_2NO_2	H	(+)-pin
3613	NH(C=NH)NH_2	PhCONH	CH_2SCH_3	H	(+)-pin
3614	NH(C=NH)NH_2	PhNHCO	CH_2SOCH_3	H	(+)-pin
3615	NH(C=NH)NH_2	$Ph(CH_2)_2$	$CH_2SO_2CH_3$	H	(+)-pin
3616	OMe	Ph	CH_3	H	(+)-pin
3617	NH(C=NH)H	Ph	CH_3	H	(+)-pin
3618	OMe	Ph	CH_3	H	OH, OH
3619	NH(C=NH)H	Ph	CH_3	H	OH, OH

BK. MS $(M=H)^+$: Calc. 477, Found 477.

BL. MS $(M=H)^+$: Calc. 539, Found 539.

BM. MS $(M=H)^+$: Calc. 505, Found 505.

Table 18



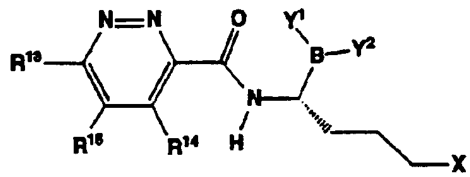
Ex	X	R^{13}	R^{14}	R^{15}	Y^1Y^2	Phys. Data
3624	CH_2NH_2	Ph	H	H	(+)-pin	
3625	CH_2NH_2	Ph	methyl	H	(+)-pin	
3626	CH_2NH_2	Ph	ethyl	H	(+)-pin	
3627	CH_2NH_2	Ph	ethyl	methyl	(+)-pin	
3628	CH_2NH_2	Ph	ethyl	ethyl	(+)-pin	
3629	CH_2NH_2	Ph	isopropyl	H	(+)-pin	
3630	CH_2NH_2	Ph	phenyl	H	(+)-pin	
3631	CH_2NH_2	Ph	CH_2CN	H	(+)-pin	
3632	CH_2NH_2	Ph	CH_2NC	H	(+)-pin	
3633	CH_2NH_2	Ph	CH_2NO_2	H	(+)-pin	
3634	CH_2NH_2	Ph	CH_2SCH_3	H	(+)-pin	
3635	CH_2NH_2	Ph	CH_2SOCH_3	H	(+)-pin	
3636	CH_2NH_2	Ph	$CH_2SO_2CH_3$	H	(+)-pin	
3637	CH_2NH_2	Ph	CH_2OH	H	(+)-pin	
3638	CH_2NH_2	Ph	CH_2COOH	H	(+)-pin	
3639	CH_2NH_2	Ph	CH_2CN_4H	H	(+)-pin	
3640	CH_2NH_2	Ph	$CH_2NHSO_2CF_3$	H	(+)-pin	
3641	CH_2NH_2	Ph	CH_2CH_2CN	H	(+)-pin	
3642	CH_2NH_2	Ph	CH_2CH_2NC	H	(+)-pin	
3643	CH_2NH_2	Ph	$CH_2CH_2NO_2$	H	(+)-pin	
3644	CH_2NH_2	Ph	$CH_2CH_2SCH_3$	H	(+)-pin	
3645	CH_2NH_2	Ph	$CH_2CH_2SOCH_3$	H	(+)-pin	
3646	CH_2NH_2	Ph	$CH_2CH_2SO_2CH_3$	H	(+)-pin	
3647	CH_2NH_2	Ph	CH_2CH_2OH	H	(+)-pin	
3648	CH_2NH_2	Ph	NO_2	H	(+)-pin	
3649	CH_2NH_2	Ph	F	H	(+)-pin	
3650	CH_2NH_2	Ph	OH	H	(+)-pin	
3651	CH_2NH_2	Ph	H	H	OH, OH	
3652	CH_2NH_2	Ph	methyl	H	OH, OH	
3653	CH_2NH_2	Ph	methyl	methyl	OH, OH	
3654	CH_2NH_2	Ph	ethyl	H	OH, OH	

3655	CH_2NH_2	Ph	ethyl	methyl	OH, OH
3656	CH_2NH_2	Ph	ethyl	ethyl	OH, OH
3657	CH_2NH_2	Ph	isopropyl	H	OH, OH
3658	CH_2NH_2	Ph	phenyl	H	OH, OH
3659	CH_2NH_2	Ph	CH_2CN	H	OH, OH
3660	CH_2NH_2	Ph	CH_2NC	H	OH, OH
3661	CH_2NH_2	Ph	CH_2NO_2	H	OH, OH
3662	CH_2NH_2	Ph	CH_2SCH_3	H	OH, OH
3663	CH_2NH_2	Ph	CH_2SOCH_3	H	OH, OH
3664	CH_2NH_2	Ph	$CH_2SO_2CH_3$	H	OH, OH
3665	CH_2NH_2	Ph	CH_2OH	H	OH, OH
3666	CH_2NH_2	Ph	CH_2COOH	H	OH, OH
3667	CH_2NH_2	Ph	CH_2CN_4H	H	OH, OH
3668	CH_2NH_2	Ph	$CH_2NHSO_2CF_3$	H	OH, OH
3669	CH_2NH_2	Ph	CH_2CH_2CN	H	OH, OH
3670	CH_2NH_2	Ph	CH_2CH_2NC	H	OH, OH
3671	CH_2NH_2	Ph	$CH_2CH_2NO_2$	H	OH, OH
3672	CH_2NH_2	Ph	$CH_2CH_2SCH_3$	H	OH, OH
3673	CH_2NH_2	Ph	$CH_2CH_2SOCH_3$	H	OH, OH
3674	CH_2NH_2	Ph	$CH_2CH_2SO_2CH_3$	H	OH, OH
3675	CH_2NH_2	Ph	CH_2CH_2OH	H	OH, OH
3676	CH_2NH_2	Ph	CH_2CH_2COOH	H	OH, OH
3677	CH_2NH_2	Ph	$CH_2CH_2CN_4H$	H	OH, OH
3678	CH_2NH_2	Ph	$CH_2CH_2NHSO_2CF_3$	H	OH, OH
3679	CH_2NH_2	$PhCH_2$	H	H	(+)-pin
3680	CH_2NH_2	PhO	methyl	H	(+)-pin
3681	CH_2NH_2	PhS	methyl	methyl	(+)-pin
3682	CH_2NH_2	PhNH	ethyl	H	(+)-pin
3683	CH_2NH_2	PhCONH	ethyl	methyl	(+)-pin
3684	CH_2NH_2	PhNHCO	ethyl	ethyl	(+)-pin
3685	CH_2NH_2	Ph	isopropyl	H	(+)-pin
3686	CH_2NH_2	$PhCH_2$	phenyl	H	(+)-pin
3687	CH_2NH_2	PhO	CH_2CN	H	(+)-pin
3688	CH_2NH_2	PhS	CH_2NC	H	(+)-pin
3689	CH_2NH_2	PhNH	CH_2NO_2	H	(+)-pin
3690	CH_2NH_2	PhCONH	CH_2SCH_3	H	(+)-pin
3691	CH_2NH_2	PhNHCO	CH_2SOCH_3	H	(+)-pin
3692	CH_2NH_2	$Ph(CH_2)_2$	$CH_2SO_2CH_3$	H	(+)-pin
3693	$NH(C{=}NH)NH_2$	Ph	H	H	(+)-pin
3694	$NH(C{=}NH)NH_2$	Ph	methyl	methyl	(+)-pin

3695	NH(C=NH)NH_2	Ph	ethyl	H	(+)-pin
3696	NH(C=NH)NH_2	Ph	ethyl	methyl	(+)-pin
3697	NH(C=NH)NH_2	Ph	ethyl	ethyl	(+)-pin
3698	NH(C=NH)NH_2	Ph	isopropyl	H	(+)-pin
3699	NH(C=NH)NH_2	Ph	phenyl	H	(+)-pin
3700	NH(C=NH)NH_2	Ph	CH_2CN	H	(+)-pin
3701	NH(C=NH)NH_2	Ph	CH_2NC	H	(+)-pin
3702	NH(C=NH)NH_2	Ph	CH_2NO_2	H	(+)-pin
3703	NH(C=NH)NH_2	Ph	CH_2SCH_3	H	(+)-pin
3704	NH(C=NH)NH_2	Ph	CH_2SOCH_3	H	(+)-pin
3705	NH(C=NH)NH_2	Ph	$CH_2SO_2CH_3$	H	(+)-pin
3706	NH(C=NH)NH_2	Ph	CH_2OH	H	(+)-pin
3707	NH(C=NH)NH_2	Ph	CH_2COOH	H	(+)-pin
3708	NH(C=NH)NH_2	Ph	CH_2CN_4H	H	(+)-pin
3709	NH(C=NH)NH_2	Ph	$CH_2NHSO_2CF_3$	H	(+)-pin
3710	NH(C=NH)NH_2	Ph	CH_2CH_2CN	H	(+)-pin
3711	NH(C=NH)NH_2	Ph	CH_2CH_2NC	H	(+)-pin
3712	NH(C=NH)NH_2	Ph	$CH_2CH_2NO_2$	H	(+)-pin
3713	NH(C=NH)NH_2	Ph	$CH_2CH_2SCH_3$	H	(+)-pin
3714	NH(C=NH)NH_2	Ph	$CH_2CH_2SOCH_3$	H	(+)-pin
3715	NH(C=NH)NH_2	Ph	$CH_2CH_2SO_2CH_3$	H	(+)-pin
3716	NH(C=NH)NH_2	Ph	CH_2CH_2OH	H	(+)-pin
3717	NH(C=NH)NH_2	Ph	NO_2	H	(+)-pin
3718	NH(C=NH)NH_2	Ph	F	H	(+)-pin
3719	NH(C=NH)NH_2	Ph	OH	H	(+)-pin
3720	NH(C=NH)NH_2	Ph	H	H	OH, OH
3721	NH(C=NH)NH_2	Ph	methyl	H	OH, OH
3722	NH(C=NH)NH_2	Ph	methyl	methyl	OH, OH
3723	NH(C=NH)NH_2	Ph	ethyl	H	OH, OH
3724	NH(C=NH)NH_2	Ph	ethyl	methyl	OH, OH
3725	NH(C=NH)NH_2	Ph	ethyl	ethyl	OH, OH
3726	NH(C=NH)NH_2	Ph	isopropyl	H	OH, OH
3727	NH(C=NH)NH_2	Ph	phenyl	H	OH, OH
3728	NH(C=NH)NH_2	Ph	CH_2CN	H	OH, OH
3729	NH(C=NH)NH_2	Ph	CH_2NC	H	OH, OH
3730	NH(C=NH)NH_2	Ph	CH_2NO_2	H	OH, OH
3731	NH(C=NH)NH_2	Ph	CH_2SCH_3	H	OH, OH
3732	NH(C=NH)NH_2	Ph	CH_2SOCH_3	H	OH, OH
3733	NH(C=NH)NH_2	Ph	$CH_2SO_2CH_3$	H	OH, OH
3734	NH(C=NH)NH_2	Ph	CH_2OH	H	OH, OH

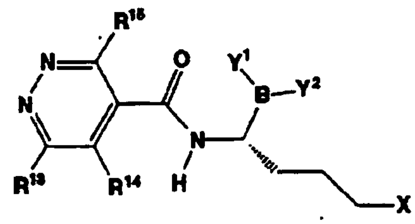
3735	NH(C=NH)NH_2	Ph	CH_2COOH	H	OH, OH
3736	NH(C=NH)NH_2	Ph	CH_2CN_4H	H	OH, OH
3737	NH(C=NH)NH_2	Ph	$CH_2NHSO_2CF_3$	H	OH, OH
3738	NH(C=NH)NH_2	Ph	CH_2CH_2CN	H	OH, OH
3739	NH(C=NH)NH_2	Ph	CH_2CH_2NC	H	OH, OH
3740	NH(C=NH)NH_2	Ph	$CH_2CH_2NO_2$	H	OH, OH
3741	NH(C=NH)NH_2	Ph	$CH_2CH_2SCH_3$	H	OH, OH
3742	NH(C=NH)NH_2	Ph	$CH_2CH_2SOCH_3$	H	OH, OH
3743	NH(C=NH)NH_2	Ph	$CH_2CH_2SO_2CH_3$	H	OH, OH
3744	NH(C=NH)NH_2	Ph	CH_2CH_2OH	H	OH, OH
3745	NH(C=NH)NH_2	Ph	CH_2CH_2COOH	H	OH, OH
3746	NH(C=NH)NH_2	Ph	$CH_2CH_2CN_4H$	H	OH, OH
3747	NH(C=NH)NH_2	Ph	$CH_2CH_2NHSO_2CF_3$	H	OH, OH
3748	NH(C=NH)NH_2	$PhCH_2$	H	H	(+)-pin
3749	NH(C=NH)NH_2	PhO	methyl	H	(+)-pin
3750	NH(C=NH)NH_2	PhS	methyl	methyl	(+)-pin
3751	NH(C=NH)NH_2	PhNH	ethyl	H	(+)-pin
3752	NH(C=NH)NH_2	PhCONH	ethyl	methyl	(+)-pin
3753	NH(C=NH)NH_2	PhNHCO	ethyl	ethyl	(+)-pin
3754	NH(C=NH)NH_2	Ph	isopropyl	H	(+)-pin
3755	NH(C=NH)NH_2	$PhCH_2$	phenyl	H	(+)-pin
3756	NH(C=NH)NH_2	PhO	CH_2CN	H	(+)-pin
3757	NH(C=NH)NH_2	PhS	CH_2NC	H	(+)-pin
3758	NH(C=NH)NH_2	PhNH	CH_2NO_2	H	(+)-pin
3759	NH(C=NH)NH_2	PhCONH	CH_2SCH_3	H	(+)-pin
3760	NH(C=NH)NH_2	PhNHCO	CH_2SOCH_3	H	(+)-pin
3761	NH(C=NH)NH_2	$Ph(CH_2)_2$	$CH_2SO_2CH_3$	H	(+)-pin
3762	OMe	Ph	CH_3	H	(+)-pin
3763	NH(C=NH)H	Ph	CH_3	H	(+)-pin
3764	OMe	Ph	CH_3	H	OH, OH
3765	NH(C=NH)H	Ph	CH_3	H	OH, OH

Table 19



Ex	X	R^{13}	R^{14}.	R^{15}	Y^1Y^2	Phys. Data
3770	CH_2NH_2	Ph	H	H	(+)-pin	
3771	CH_2NH_2	Ph	methyl	H	(+)-pin	
3772	CH_2NH_2	Ph	H	H	OH, OH	
3773	CH_2NH_2	Ph	methyl	H	OH, OH	
3774	$NH(C{=}NH)NH_2$	Ph	H	H	(+)-pin	
3775	$NH(C{=}NH)NH_2$	Ph	methyl	H	(+)-pin	
3776	$NH(C{=}NH)NH_2$	Ph	H	H	OH, OH	
3777	$NH(C{=}NH)NH_2$	Ph	methyl	H	OH, OH	
3778	OMe	Ph	CH_3	H	(+)-pin	
3779	NH(C=NH)H	Ph	CH_3	H	(+)-pin	
3780	OMe	Ph	CH_3	H	OH, OH	
3781	NH(C=NH)H	Ph	CH_3	H	OH, OH	

Table 20



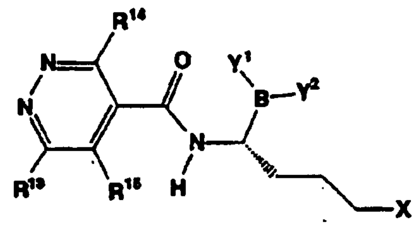
Ex	X	R^{13}	R^{14}	R^{15}	Y^1Y^2	Phys. Data
3786	CH_2NH_2	Ph	H	H	(+)-pin	
3787	CH_2NH_2	Ph	methyl	methyl	(+)-pin	
3788	CH_2NH_2	Ph	ethyl	H	(+)-pin	
3789	CH_2NH_2	Ph	ethyl	methyl	(+)-pin	
3790	CH_2NH_2	Ph	ethyl	ethyl	(+)-pin	
3791	CH_2NH_2	Ph	isopropyl	H	(+)-pin	
3792	CH_2NH_2	Ph	phenyl	H	(+)-pin	
3793	CH_2NH_2	Ph	CH_2CN	H	(+)-pin	
3794	CH_2NH_2	Ph	CH_2NC	H	(+)-pin	
3795	CH_2NH_2	Ph	CH_2NO_2	H	(+)-pin	
3796	CH_2NH_2	Ph	CH_2SCH_3	H	(+)-pin	
3797	CH_2NH_2	Ph	CH_2SOCH_3	H	(+)-pin	
3798	CH_2NH_2	Ph	$CH_2SO_2CH_3$	H	(+)-pin	
3799	CH_2NH_2	Ph	CH_2OH	H	(+)-pin	
3800	CH_2NH_2	Ph	CH_2COOH	H	(+)-pin	
3801	CH_2NH_2	Ph	CH_2CN_4H	H	(+)-pin	
3802	CH_2NH_2	Ph	$CH_2NHSO_2CF_3$	H	(+)-pin	
3803	CH_2NH_2	Ph	CH_2CH_2CN	H	(+)-pin	
3804	CH_2NH_2	Ph	CH_2CH_2NC	H	(+)-pin	
3805	CH_2NH_2	Ph	$CH_2CH_2NO_2$	H	(+)-pin	
3806	CH_2NH_2	Ph	$CH_2CH_2SCH_3$	H	(+)-pin	
3807	CH_2NH_2	Ph	$CH_2CH_2SOCH_3$	H	(+)-pin	
3808	CH_2NH_2	Ph	$CH_2CH_2SO_2CH_3$	H	(+)-pin	
3809	CH_2NH_2	Ph	CH_2CH_2OH	H	(+)-pin	
3810	CH_2NH_2	Ph	NO_2	H	(+)-pin	
3811	CH_2NH_2	Ph	F	H	(+)-pin	
3812	CH_2NH_2	Ph	OH	H	(+)-pin	
3813	CH_2NH_2	Ph	H	H	OH, OH	
3814	CH_2NH_2	Ph	methyl	H	OH, OH	
3815	CH_2NH_2	Ph	methyl	methyl	OH, OH	
3816	CH_2NH_2	Ph	ethyl	H	OH, OH	

3817	CH_2NH_2	Ph	ethyl	methyl	OH, OH
3818	CH_2NH_2	Ph	ethyl	ethyl	OH, OH
3819	CH_2NH_2	Ph	isopropyl	H	OH, OH
3820	CH_2NH_2	Ph	phenyl	H	OH, OH
3821	CH_2NH_2	Ph	CH_2CN	H	OH, OH
3822	CH_2NH_2	Ph	CH_2NC	H	OH, OH
3823	CH_2NH_2	Ph	CH_2NO_2	H	OH, OH
3824	CH_2NH_2	Ph	CH_2SCH_3	H	OH, OH
3825	CH_2NH_2	Ph	CH_2SOCH_3	H	OH, OH
3826	CH_2NH_2	Ph	$CH_2SO_2CH_3$	H	OH, OH
3827	CH_2NH_2	Ph	CH_2OH	H	OH, OH
3828	CH_2NH_2	Ph	CH_2COOH	H	OH, OH
3829	CH_2NH_2	Ph	CH_2CN_4H	H	OH, OH
3830	CH_2NH_2	Ph	$CH_2NHSO_2CF_3$	H	OH, OH
3831	CH_2NH_2	Ph	CH_2CH_2CN	H	OH, OH
3832	CH_2NH_2	Ph	CH_2CH_2NC	H	OH, OH
3833	CH_2NH_2	Ph	$CH_2CH_2NO_2$	H	OH, OH
3834	CH_2NH_2	Ph	$CH_2CH_2SCH_3$	H	OH, OH
3835	CH_2NH_2	Ph	$CH_2CH_2SOCH_3$	H	OH, OH
3836	CH_2NH_2	Ph	$CH_2CH_2SO_2CH_3$	H	OH, OH
3837	CH_2NH_2	Ph	CH_2CH_2OH	H	OH, OH
3838	CH_2NH_2	Ph	CH_2CH_2COOH	H	OH, OH
3839	CH_2NH_2	Ph	$CH_2CH_2CN_4H$	H	OH, OH
3840	CH_2NH_2	Ph	$CH_2CH_2NHSO_2CF_3$	H	OH, OH
3841	CH_2NH_2	$PhCH_2$	H	H	(+)-pin
3842	CH_2NH_2	PhO	methyl	H	(+)-pin
3843	CH_2NH_2	PhS	methyl	methyl	(+)-pin
3844	CH_2NH_2	PhNH	ethyl	H	(+)-pin
3845	CH_2NH_2	PhCONH	ethyl	methyl	(+)-pin
3846	CH_2NH_2	PhNHCO	ethyl	ethyl	(+)-pin
3847	CH_2NH_2	Ph	isopropyl	H	(+)-pin
3848	CH_2NH_2	$PhCH_2$	phenyl	H	(+)-pin
3849	CH_2NH_2	PhO	CH_2CN	H	(+)-pin
3850	CH_2NH_2	PhS	CH_2NC	H	(+)-pin
3851	CH_2NH_2	PhNH	CH_2NO_2	H	(+)-pin
3852	CH_2NH_2	PhCONH	CH_2SCH_3	H	(+)-pin
3853	CH_2NH_2	PhNHCO	CH_2SOCH_3	H	(+)-pin
3854	CH_2NH_2	$Ph(CH_2)_2$	$CH_2SO_2CH_3$	H	(+)-pin
3855	$NH(C{=}NH)NH_2$	Ph	H	H	(+)-pin
3856	$NH(C{=}NH)NH_2$	Ph	methyl	methyl	(+)-pin

3857	NH(C=NH)NH_2	Ph	ethyl	H	(+)-pin
3858	NH(C=NH)NH_2	Ph	ethyl	methyl	(+)-pin
3859	NH(C=NH)NH_2	Ph	ethyl	ethyl	(+)-pin
3860	NH(C=NH)NH_2	Ph	isopropyl	H	(+)-pin
3861	NH(C=NH)NH_2	Ph	phenyl	H	(+)-pin
3862	NH(C=NH)NH_2	Ph	CH_2CN	H	(+)-pin
3863	NH(C=NH)NH_2	Ph	CH_2NC	H	(+)-pin
3864	NH(C=NH)NH_2	Ph	CH_2NO_2	H	(+)-pin
3865	NH(C=NH)NH_2	Ph	CH_2SCH_3	H	(+)-pin
3866	NH(C=NH)NH_2	Ph	CH_2SOCH_3	H	(+)-pin
3867	NH(C=NH)NH_2	Ph	$CH_2SO_2CH_3$	H	(+)-pin
3868	NH(C=NH)NH_2	Ph	CH_2OH	H	(+)-pin
3869	NH(C=NH)NH_2	Ph	CH_2COOH	H	(+)-pin
3870	NH(C=NH)NH_2	Ph	CH_2CN_4H	H	(+)-pin
3871	NH(C=NH)NH_2	Ph	$CH_2NHSO_2CF_3$	H	(+)-pin
3872	NH(C=NH)NH_2	Ph	CH_2CH_2CN	H	(+)-pin
3873	NH(C=NH)NH_2	Ph	CH_2CH_2NC	H	(+)-pin
3874	NH(C=NH)NH_2	Ph	$CH_2CH_2NO_2$	H	(+)-pin
3875	NH(C=NH)NH_2	Ph	$CH_2CH_2SCH_3$	H	(+)-pin
3876	NH(C=NH)NH_2	Ph	$CH_2CH_2SOCH_3$	H	(+)-pin
3877	NH(C=NH)NH_2	Ph	$CH_2CH_2SO_2CH_3$	H	(+)-pin
3878	NH(C=NH)NH_2	Ph	CH_2CH_2OH	H	(+)-pin
3879	NH(C=NH)NH_2	Ph	NO_2	H	(+)-pin
3880	NH(C=NH)NH_2	Ph	F	H	(+)-pin
3881	NH(C=NH)NH_2	Ph	OH	H	(+)-pin
3882	NH(C=NH)NH_2	Ph	H	H	OH, OH
3883	NH(C=NH)NH_2	Ph	methyl	H	OH, OH
3884	NH(C=NH)NH_2	Ph	methyl	methyl	OH, OH
3885	NH(C=NH)NH_2	Ph	ethyl	H	OH, OH
3886	NH(C=NH)NH_2	Ph	ethyl	methyl	OH, OH
3887	NH(C=NH)NH_2	Ph	ethyl	ethyl	OH, OH
3888	NH(C=NH)NH_2	Ph	isopropyl	H	OH, OH
3889	NH(C=NH)NH_2	Ph	phenyl	H	OH, OH
3890	NH(C=NH)NH_2	Ph	CH_2CN	H	OH, OH
3891	NH(C=NH)NH_2	Ph	CH_2NC	H	OH, OH
3892	NH(C=NH)NH_2	Ph	CH_2NO_2	H	OH, OH
3893	NH(C=NH)NH_2	Ph	CH_2SCH_3	H	OH, OH
3894	NH(C=NH)NH_2	Ph	CH_2SOCH_3	H	OH, OH
3895	NH(C=NH)NH_2	Ph	$CH_2SO_2CH_3$	H	OH, OH
3896	NH(C=NH)NH_2	Ph	CH_2OH	H	OH, OH

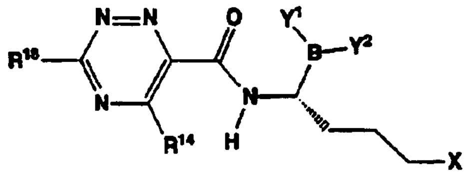
3897	NH(C=NH)NH$_2$	Ph	CH_2COOH	H	OH, OH
3898	NH(C=NH)NH$_2$	Ph	CH_2CN_4H	H	OH, OH
3899	NH(C=NH)NH$_2$	Ph	$CH_2NHSO_2CF_3$	H	OH, OH
3900	NH(C=NH)NH$_2$	Ph	CH_2CH_2CN	H	OH, OH
3901	NH(C=NH)NH$_2$	Ph	CH_2CH_2NC	H	OH, OH
3902	NH(C=NH)NH$_2$	Ph	$CH_2CH_2NO_2$	H	OH, OH
3903	NH(C=NH)NH$_2$	Ph	$CH_2CH_2SCH_3$	H	OH, OH
3904	NH(C=NH)NH$_2$	Ph	$CH_2CH_2SOCH_3$	H	OH, OH
3905	NH(C=NH)NH$_2$	Ph	$CH_2CH_2SO_2CH_3$	H	OH, OH
3906	NH(C=NH)NH$_2$	Ph	CH_2CH_2OH	H	OH, OH
3907	NH(C=NH)NH$_2$	Ph	CH_2CH_2COOH	H	OH, OH
3908	NH(C=NH)NH$_2$	Ph	$CH_2CH_2CN_4H$	H	OH, OH
3909	NH(C=NH)NH$_2$	Ph	$CH_2CH_2NHSO_2CF_3$	H	OH, OH
3910	NH(C=NH)NH$_2$	PhCH$_2$	H	H	(+)-pin
3911	NH(C=NH)NH$_2$	PhO	methyl	H	(+)-pin
3912	NH(C=NH)NH$_2$	PhS	methyl	methyl	(+)-pin
3913	NH(C=NH)NH$_2$	PhNH	ethyl	H	(+)-pin
3914	NH(C=NH)NH$_2$	PhCONH	ethyl	methyl	(+)-pin
3915	NH(C=NH)NH$_2$	PhNHCO	ethyl	ethyl	(+)-pin
3916	NH(C=NH)NH$_2$	Ph	isopropyl	H	(+)-pin
3917	NH(C=NH)NH$_2$	PhCH$_2$	phenyl	H	(+)-pin
3918	NH(C=NH)NH$_2$	PhO	CH_2CN	H	(+)-pin
3919	NH(C=NH)NH$_2$	PhS	CH_2NC	H	(+)-pin
3920	NH(C=NH)NH$_2$	PhNH	CH_2NO_2	H	(+)-pin
3921	NH(C=NH)NH$_2$	PhCONH	CH_2SCH_3	H	(+)-pin
3922	NH(C=NH)NH$_2$	PhNHCO	CH_2SOCH_3	H	(+)-pin
3923	NH(C=NH)NH$_2$	Ph(CH$_2$)$_2$	$CH_2SO_2CH_3$	H	(+)-pin
3924	OMe	Ph	CH_3	H	(+)-pin
3925	NH(C=NH)H	Ph	CH_3	H	(+)-pin
3926	OMe	Ph	CH_3	H	OH, OH
3927	NH(C=NH)H	Ph	CH_3	H	OH, OH

Table 21



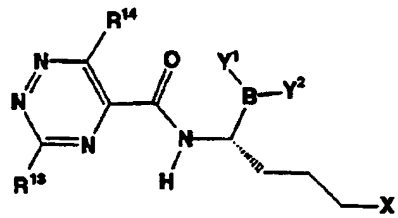
Ex	X	R^{13}	R^{14}	R^{15}	Y^1Y^2	Phys. Data
3932	CH_2NH_2	Ph	H	H	(+)-pin	
3933	CH_2NH_2	Ph	methyl	H	(+)-pin	
3934	CH_2NH_2	Ph	H	H	OH, OH	
3935	CH_2NH_2	Ph	methyl	H	OH, OH	
3936	$NH(C{=}NH)NH_2$	Ph	H	H	(+)-pin	
3937	$NH(C{=}NH)NH_2$	Ph	methyl	H	(+)-pin	
3938	$NH(C{=}NH)NH_2$	Ph	H	H	OH, OH	
3939	$NH(C{=}NH)NH_2$	Ph	methyl	H	OH, OH	
3940	OMe	Ph	CH_3	H	(+)-pin	
3941	NH(C=NH)H	Ph	CH_3	H	(+)-pin	
3942	OMe	Ph	CH_3	H	OH, OH	
3943	NH(C=NH)H	Ph	CH_3	H	OH, OH	

Table 22



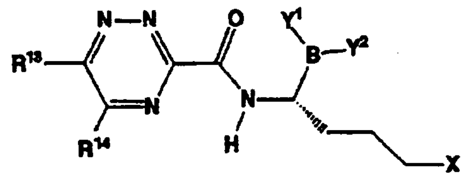
Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
3948	CH_2NH_2	Ph	H	(+)-pin	
3949	CH_2NH_2	Ph	methyl	(+)-pin	
3950	CH_2NH_2	Ph	H	OH, OH	
3951	CH_2NH_2	Ph	methyl	OH, OH	
3952	$NH(C=NH)NH_2$	Ph	H	(+)-pin	
3953	$NH(C=NH)NH_2$	Ph	methyl	(+)-pin	
3954	$NH(C=NH)NH_2$	Ph	H	OH, OH	
3955	$NH(C=NH)NH_2$	Ph	methyl	OH, OH	
3956	OMe	Ph	CH_3	(+)-pin	
3957	NH(C=NH)H	Ph	CH_3	(+)-pin	
3958	OMe	Ph	CH_3	OH, OH	
3959	NH(C=NH)H	Ph	CH_3	OH, OH	

Table 23



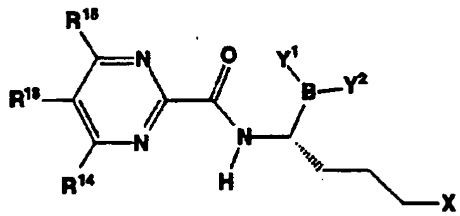
Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
3964	CH_2NH_2	Ph	H	(+)-pin	
3965	CH_2NH_2	Ph	methyl	(+)-pin	
3966	CH_2NH_2	Ph	H	OH, OH	
3967	CH_2NH_2	Ph	methyl	OH, OH	
3968	$NH(C{=}NH)NH_2$	Ph	H	(+)-pin	
3969	$NH(C{=}NH)NH_2$	Ph	methyl	(+)-pin	
3970	$NH(C{=}NH)NH_2$	Ph	H	OH, OH	
3971	$NH(C{=}NH)NH_2$	Ph	methyl	OH, OH	
3972	OMe	Ph	CH_3	(+)-pin	
3973	NH(C=NH)H	Ph	CH_3	(+)-pin	
3974	OMe	Ph	CH_3	OH, OH	
3975	NH(C=NH)H	Ph	CH_3	OH, OH	

Table 24



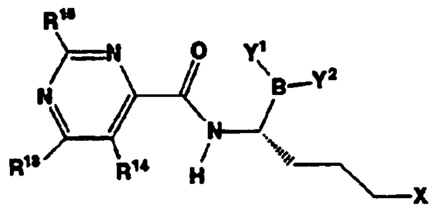
Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
3980	CH_2NH_2	Ph	H	(+)-pin	
3981	CH_2NH_2	Ph	methyl	(+)-pin	
3982	CH_2NH_2	Ph	H	OH, OH	
3983	CH_2NH_2	Ph	methyl	OH, OH	
3984	$NH(C{=}NH)NH_2$	Ph	H	(+)-pin	
3985	$NH(C{=}NH)NH_2$	Ph	methyl	(+)-pin	
3986	$NH(C{=}NH)NH_2$	Ph	H	OH, OH	
3987	$NH(C{=}NH)NH_2$	Ph	methyl	OH, OH	
3988	OMe	Ph	CH_3	(+)-pin	
3989	NH(C=NH)H	Ph	CH_3	(+)-pin	
3990	OMe	Ph	CH_3	OH, OH	
3991	NH(C=NH)H	Ph	CH_3	OH, OH	

Table 25



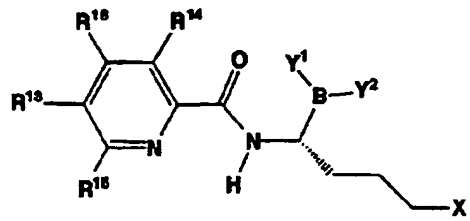
Ex	X	R^{13}	R^{14}	R^{15}	Y^1Y^2	Phys. Data
3996	CH_2NH_2	Ph	H	H	(+)-pin	
3997	CH_2NH_2	Ph	methyl	H	(+)-pin	
3998	CH_2NH_2	Ph	H	H	OH, OH	
3999	CH_2NH_2	Ph	methyl	H	OH, OH	
4000	$NH(C{=}NH)NH_2$	Ph	H	H	(+)-pin	
4001	$NH(C{=}NH)NH_2$	Ph	methyl	H	(+)-pin	
4002	$NH(C{=}NH)NH_2$	Ph	H	H	OH, OH	
4003	$NH(C{=}NH)NH_2$	Ph	methyl	H	OH, OH	
4004	OMe	Ph	CH_3	H	(+)-pin	
4005	NH(C=NH)H	Ph	CH_3	H	(+)-pin	
4006	OMe	Ph	CH_3	H	OH, OH	
4007	NH(C=NH)H	Ph	CH_3	H	OH, OH	

Table 26



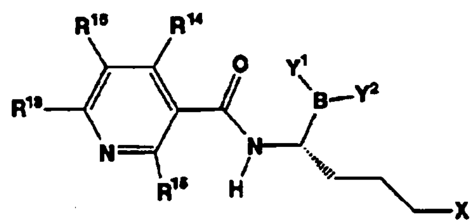
Ex	X	R^{13}	R^{14}	R^{15}	Y^1Y^2	Phys. Data
4012	CH_2NH_2	Ph	H	H	(+)-pin	
4013	CH_2NH_2	Ph	methyl	H	(+)-pin	
4014	CH_2NH_2	Ph	H	H	OH, OH	
4015	CH_2NH_2	Ph	methyl	H	OH, OH	
4016	CH_2NH_2	Ph	H	Ph	(+)-pin	
4017	CH_2NH_2	Ph	H	Ph	OH, OH	
4018	$NH(C{=}NH)NH_2$	Ph	H	H	(+)-pin	
4019	$NH(C{=}NH)NH_2$	Ph	methyl	H	(+)-pin	
4020	$NH(C{=}NH)NH_2$	Ph	H	H	OH, OH	
4021	$NH(C{=}NH)NH_2$	Ph	methyl	H	OH, OH	
4022	$NH(C{=}NH)NH_2$	Ph	H	Ph	(+)-pin	
4023	$NH(C{=}NH)NH_2$	Ph	H	Ph	OH, OH	
4024	OMe	Ph	CH_3	H	(+)-pin	
4025	NH(C=NH)H	Ph	CH_3	H	(+)-pin	
4026	OMe	Ph	CH_3	H	OH, OH	
4027	NH(C=NH)H	Ph	CH_3	H	OH, OH	

Table 27



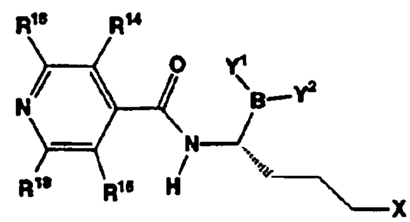
Ex	X	R^{13}	R^{14}	R^{15}	R^{16}	Y^1Y^2	Phys. Data
4032	CH_2NH_2	Ph	H	H	H	(+)-pin	
4033	CH_2NH_2	Ph	methyl	H	H	(+)-pin	
4034	CH_2NH_2	Ph	H	H	H	OH, OH	
4035	CH_2NH_2	Ph	methyl	H	H	OH, OH	
4036	$NH(C{=}NH)NH_2$	Ph	H	H	H	(+)-pin	
4037	$NH(C{=}NH)NH_2$	Ph	methyl	H	H	(+)-pin	
4038	$NH(C{=}NH)NH_2$	Ph	H	H	H	OH, OH	
4039	$NH(C{=}NH)NH_2$	Ph	methyl	H	H	OH, OH	
4040	$NH(C{=}NH)NH_2$	Ph	H	CH_3	CH_3	(+)-pin	
4041	$NH(C{=}NH)NH_2$	Ph	H	CH_3	CH_3	OH, OH	
4042	OMe	Ph	CH_3	H	H	(+)-pin	
4043	$NH(C{=}NH)H$	Ph	CH_3	H	H	(+)-pin	
4044	OMe	Ph	CH_3	H	H	OH, OH	
4045	$NH(C{=}NH)H$	Ph	CH_3	H	H	OH, OH	

Table 28



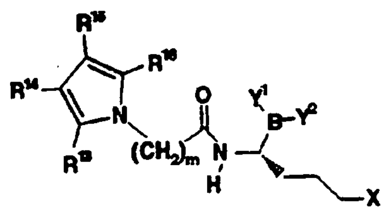
Ex	X	R^{13}	R^{14}	R^{15}	R^{16}	Y^1Y^2	Phys. Data
4050	CH_2NH_2	Ph	CH_2CO_2H	H	H	(+)-pin	
4051	CH_2NH_2	Ph	methyl	H	H	(+)-pin	
4052	CH_2NH_2	Ph	CH_2CO_2H	H	H	OH, OH	
4053	CH_2NH_2	Ph	methyl	H	H	OH, OH	
4054	$NH(C{=}NH)NH_2$	Ph	CH_2CN	H	H	(+)-pin	
4055	$NH(C{=}NH)NH_2$	Ph	methyl	H	H	(+)-pin	
4056	$NH(C{=}NH)NH_2$	Ph	CH_2CN	H	H	OH, OH	
4057	$NH(C{=}NH)NH_2$	Ph	methyl	H	H	OH, OH	
4058	$NH(C{=}NH)NH_2$	Ph	CH_3	CH_3	H	(+)-pin	
4059	$NH(C{=}NH)NH_2$	Ph	CH_3	CH_3	H	OH, OH	
4060	OMe	Ph	CH_3	H	H	(+)-pin	
4061	$NH(C{=}NH)H$	Ph	CH_3	H	H	(+)-pin	
4062	OMe	Ph	CH_3	H	H	OH, OH	
4063	$NH(C{=}NH)H$	Ph	CH_3	H	H	OH, OH	
4064	CH_2NH_2	Ph	H	H	H	(+)-pin	
4065	CH_2NH_2	Ph	H	H	H	OH, OH	

Table 29



Ex	X	R^{13}	R^{14}	R^{15}	R^{16}	Y^1Y^2	Phys. Data
4070	CH_2NH_2	Ph	H	H	H	(+)-pin	
4071	CH_2NH_2	Ph	methyl	H	H	(+)-pin	
4072	CH_2NH_2	Ph	H	H	H	OH, OH	
4073	CH_2NH_2	Ph	methyl	H	H	OH, OH	
4074	$NH(C{=}NH)NH_2$	Ph	H	H	H	(+)-pin	
4075	$NH(C{=}NH)NH_2$	Ph	methyl	H	H	(+)-pin	
4076	$NH(C{=}NH)NH_2$	Ph	H	H	H	OH, OH	
4077	$NH(C{=}NH)NH_2$	Ph	methyl	H	H	OH, OH	
4078	$NH(C{=}NH)NH_2$	Ph	CH_3	CH_3	H	(+)-pin	
4079	$NH(C{=}NH)NH_2$	Ph	CH_3	CH_3	H	OH, OH	
4080	OMe	Ph	H	H	OH	(+)-pin	
4081	NH(C=NH)H	Ph	H	H	F	(+)-pin	
4082	OMe	Ph	H	H	Me	OH, OH	
4083	NH(C=NH)H	Ph	H	H	Et	OH, OH	

Table 30

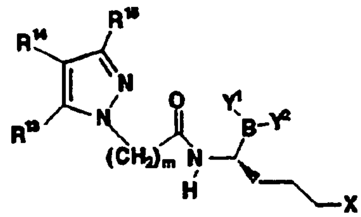


and m=1

Ex	X	R^{13}	R^{14}	R^{15}	R^{16}	Y^1Y^2	Phys. Data
4088	CH_2NH_2	$PhCH_2$	H	H	Cl	(+)-pin	
4089	CH_2NH_2	$PhCH_2$	H	methyl	H	(+)-pin	
4090	CH_2NH_2	$PhCH_2$	H	CH_2CN	H	(+)-pin	
4091	CH_2NH_2	$PhCH_2$	H	CH_2COOH	H	(+)-pin	
4092	CH_2NH_2	$PhCH_2$	H	CH_2NC	H	(+)-pin	
4093	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	H	(+)-pin	
4094	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	H	(+)-pin	
4095	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	H	(+)-pin	
4096	CH_2NH_2	$PhCH_2$	H	H	NO_2	OH, OH	
4097	CH_2NH_2	$PhCH_2$	H	methyl	H	OH, OH	
4098	CH_2NH_2	$PhCH_2$	H	CH_2CN	H	OH, OH	
4099	CH_2NH_2	$PhCH_2$	H	CH_2COOH	H	OH, OH	
4100	CH_2NH_2	$PhCH_2$	H	CH_2NC	H	OH, OH	
4101	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	H	OH, OH	
4102	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	H	OH, OH	
4103	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	H	OH, OH	
4104	$NH(C{=}NH)NH_2$	$PhCH_2$	H	H	H	(+)-pin	
4105	$NH(C{=}NH)NH_2$	$PhCH_2$	H	methyl	H	(+)-pin	
4106	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2CN	H	(+)-pin	
4107	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2COOH	H	(+)-pin	
4108	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NC	H	(+)-pin	
4109	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NO_2	H	(+)-pin	
4110	$NH(C{=}NH)NH_2$	$PhCH_2$	H	$(CH_2)_2OH$	H	(+)-pin	
4111	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2SOCH_3	H	(+)-pin	
4112	$NH(C{=}NH)NH_2$	$PhCH_2$	H	H	H	OH, OH	
4113	$NH(C{=}NH)NH_2$	$PhCH_2$	H	methyl	H	OH, OH	
4114	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2CN	H	OH, OH	
4115	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2COOH	H	OH, OH	
4116	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NC	H	OH, OH	
4117	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NO_2	H	OH, OH	
4118	$NH(C{=}NH)NH_2$	$PhCH_2$	H	$(CH_2)_2OH$	H	OH, OH	

4119	NH(C=NH)NH$_2$	PhCH$_2$	H	CH$_2$SOCH$_3$	H	OH, OH

Table 31

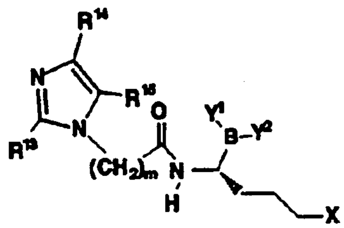


and m=1

Ex	X	R^{13}	R^{14}	R^{15}	Y^1Y^2	Phys. Data
4124	CH_2NH_2	$PhCH_2$	H	H	(+)-pin	
4125	CH_2NH_2	$PhCH_2$	H	methyl	(+)-pin	
4126	CH_2NH_2	$PhCH_2$	H	CH_2CN	(+)-pin	
4127	CH_2NH_2	$PhCH_2$	H	CH_2COOH	(+)-pin	
4128	CH_2NH_2	$PhCH_2$	H	CH_2NC	(+)-pin	
4129	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	(+)-pin	
4130	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin	
4131	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	(+)-pin	
4132	CH_2NH_2	$PhCH_2$	H	H	OH, OH	
4133	CH_2NH_2	$PhCH_2$	H	methyl	OH, OH	
4134	CH_2NH_2	$PhCH_2$	H	CH_2CN	OH, OH	
4135	CH_2NH_2	$PhCH_2$	H	CH_2COOH	OH, OH	
4136	CH_2NH_2	$PhCH_2$	H	CH_2NC	OH, OH	
4137	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	OH, OH	
4138	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH	
4139	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	OH, OH	
4140	$NH(C{=}NH)NH_2$	$PhCH_2$	H	H	(+)-pin	
4141	$NH(C{=}NH)NH_2$	$PhCH_2$	H	methyl	(+)-pin	
4142	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2CN	(+)-pin	
4143	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2COOH	(+)-pin	
4144	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NC	(+)-pin	
4145	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NO_2	(+)-pin	
4146	$NH(C{=}NH)NH_2$	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin	
4147	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2SOCH_3	(+)-pin	
4148	$NH(C{=}NH)NH_2$	$PhCH_2$	H	H	OH, OH	
4149	$NH(C{=}NH)NH_2$	$PhCH_2$	H	methyl	OH, OH	
4150	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2CN	OH, OH	
4151	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2COOH	OH, OH	
4152	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NC	OH, OH	
4153	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NO_2	OH, OH	
4154	$NH(C{=}NH)NH_2$	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH	

4155	NH(C=NH)NH_2	$PhCH_2$	H	CH_2SOCH_3	OH, OH

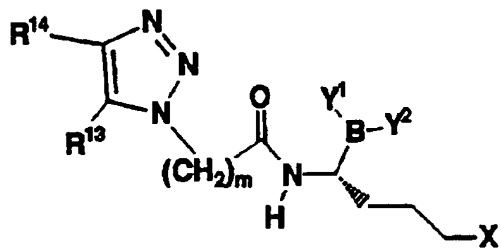
Table 32

 and m=1

Ex	X	R^{13}	R^{15}	R^{14}	Y^1Y^2	Phys. Data
4160	CH_2NH_2	$PhCH_2$	H	H	(+)-pin	
4161	CH_2NH_2	$PhCH_2$	Cl	H	(+)-pin	
4162	CH_2NH_2	$PhCH_2$	H	methyl	(+)-pin	
4163	CH_2NH_2	$PhCH_2$	H	CH_2CN	(+)-pin	
4164	CH_2NH_2	$PhCH_2$	Cl	CH_2CN	(+)-pin	
4165	CH_2NH_2	$PhCH_2$	H	CH_2COOH	(+)-pin	
4166	CH_2NH_2	$PhCH_2$	H	CH_2NC	(+)-pin	
4167	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	(+)-pin	
4168	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin	
4169	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	(+)-pin	
4170	CH_2NH_2	$PhCH_2$	H	H	OH, OH	
4171	CH_2NH_2	$PhCH_2$	Cl	H	OH, OH	
4172	CH_2NH_2	$PhCH_2$	H	methyl	OH, OH	
4173	CH_2NH_2	$PhCH_2$	H	CH_2CN	OH, OH	
4174	CH_2NH_2	$PhCH_2$	Cl	CH_2CN	OH, OH	
4175	CH_2NH_2	$PhCH_2$	H	CH_2COOH	OH, OH	
4176	CH_2NH_2	$PhCH_2$	H	CH_2NC	OH, OH	
4177	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	OH, OH	
4178	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH	
4179	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	OH, OH	
4180	$NH(C{=}NH)NH_2$	$PhCH_2$	H	H	(+)-pin	
4181	$NH(C{=}NH)NH_2$	$PhCH_2$	H	methyl	(+)-pin	
4182	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2CN	(+)-pin	
4183	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2COOH	(+)-pin	
4184	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NC	(+)-pin	
4185	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NO_2	(+)-pin	
4186	$NH(C{=}NH)NH_2$	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin	
4187	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2SOCH_3	(+)-pin	
4188	$NH(C{=}NH)NH_2$	$PhCH_2$	H	H	OH, OH	
4189	$NH(C{=}NH)NH_2$	$PhCH_2$	H	methyl	OH, OH	

4190	NH(C=NH)NH_2	$PhCH_2$	H	CH_2CN	OH, OH
4191	NH(C=NH)NH_2	$PhCH_2$	H	CH_2COOH	OH, OH
4192	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NC	OH, OH
4193	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NO_2	OH, OH
4194	NH(C=NH)NH_2	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH
4195	NH(C=NH)NH_2	$PhCH_2$	H	CH_2SOCH_3	OH, OH

Table 33

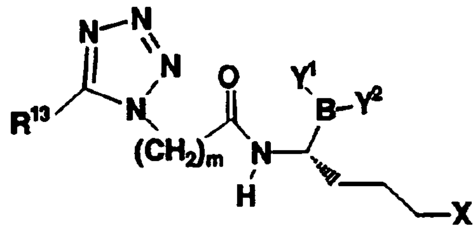


and m=1

Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
4200	CH_2NH_2	$PhCH_2$	H	(+)-pin	
4201	CH_2NH_2	$PhCH_2$	methyl	(+)-pin	
4202	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin	
4203	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin	
4204	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
4205	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin	
4206	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin	
4207	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	
4208	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin	
4209	CH_2NH_2	$PhCH_2$	H	OH, OH	
4210	CH_2NH_2	$PhCH_2$	methyl	OH, OH	
4211	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH	
4212	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH	
4213	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH	
4214	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH	
4215	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH	
4216	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH	
4217	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH	
4218	$NH(C{=}NH)NH_2$	$PhCH_2$	H	(+)-pin	
4219	$NH(C{=}NH)NH_2$	$PhCH_2$	methyl	(+)-pin	
4220	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2CN	(+)-pin	
4221	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2CN$	(+)-pin	
4222	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2COOH	(+)-pin	
4223	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2COOH$		
4224	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NC	(+)-pin	
4225	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NO_2	(+)-pin	
4226	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	
4227	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2SOCH_3	(+)-pin	
4228	$NH(C{=}NH)NH_2$	$PhCH_2$	H	OH, OH	
4229	$NH(C{=}NH)NH_2$	$PhCH_2$	methyl	OH, OH	

4230	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
4231	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4232	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
4233	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4234	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
4235	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4236	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4237	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH

Table 34



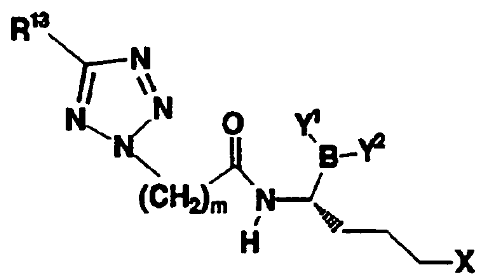
Ex	X	R^{13}	Y^1Y^2	Phys. Data
		m=1		
4242	CH_2NH_2	$PhCH_2$	(+)-pin	
4243	CH_2NH_2	$PhCH_2$	OH, OH	
4244	$NH(C{=}NH)NH_2$	$PhCH_2$	(+)-pin	
4245	$NH(C{=}NH)NH_2$	$PhCH_2$	OH, OH	
4246	OMe	$PhCH_2$	(+)-pin	
4247	OMe	$PhCH_2$	OH, OH	
4248	$NH(C{=}NH)H$	$PhCH_2$	(+)-pin	
4249	$NH(C{=}NH)H$	$PhCH_2$	OH, OH	
4250	CH_2NH_2	$PhCH_2CH_2$	(+)-pin	DB
4251	CH_2NH_2	$PhCH_2CH_2$	OH, OH	
4252	$NH(C{=}NH)NH_2$	$PhCH_2CH_2$	(+)-pin	
4253	$NH(C{=}NH)NH_2$	$PhCH_2CH_2$	OH, CH	
4254	OMe	$PhCH_2CH_2$	(+)-pin	
4255	OMe	$PhCH_2CH_2$	OH, OH	
4256	$NH(C{=}NH)H$	$PhCH_2CH_2$	(+)-pin	
4257	$NH(C{=}NH)H$	$PhCH_2CH_2$	OH, OH	DC
4258	CH_2NH_2	Ph	(+)-pin	
4259	CH_2NH_2	Ph	OH, OH	
4260	$NH(C{=}NH)NH_2$	Ph	(+)-pin	
4261	$NH(C{=}NH)NH_2$	Ph	OH, OH	
4262	OMe	Ph	(+)-pin	
4263	OMe	Ph	OH, OH	
4264	$NH(C{=}NH)H$	Ph	(+)-pin	
4265	$NH(C{=}NH)H$	Ph	OH, OH	
4266	CH_2NH_2	$PhCH_2CH_2S$	(+)-pin	
4267	CH_2NH_2	$PhCH_2S$	(+)-pin	
4268	CH_2NH_2	$PhCH_2CH_2S$	OH, OH	
4269	CH_2NH_2	$PhCH_2S$	OH, OH	
4270		m=2		

4271	CH_2NH_2	$PhCH_2$	(+)-pin
4272	CH_2NH_2	$PhCH_2$	OH, OH
4273	NH(C=NH)NH_2	$PhCH_2$	(+)-pin
4274	NH(C=NH)NH_2	$PhCH_2$	OH, OH
4275	OMe	$PhCH_2$	(+)-pin
4276	OMe	$PhCH_2$	OH, OH
4277	NH(C=NH)H	$PhCH_2$	(+)-pin
4278	NH(C=NH)H	$PhCH_2$	OH, OH
4279	CH_2NH_2	$PhCH_2CH_2$	(+)-pin
4280	CH_2NH_2	$PhCH_2CH_2$	OH, OH
4281	NH(C=NH)NH_2	$PhCH_2CH_2$	(+)-pin
4282	NH(C=NH)NH_2	$PhCH_2CH_2$	OH, OH
4283	OMe	$PhCH_2CH_2$	(+)-pin
4284	OMe	$PhCH_2CH_2$	OH, OH
4285	NH(C=NH)H	$PhCH_2CH_2$	(+)-pin
4286	NH(C=NH)H	$PhCH_2CH_2$	OH, OH
4287	CH_2NH_2	Ph	(+)-pin
4288	CH_2NH_2	Ph	OH, OH
4289	NH(C=NH)NH_2	Ph	(+)-pin
4290	NH(C=NH)NH_2	Ph	OH, OH
4291	OMe	Ph	(+)-pin
4292	OMe	Ph	OH, OH
4293	NH(C=NH)H	Ph	(+)-pin
4294	NH(C=NH)H	Ph	OH, OH

DB. HRMS Calc'd. 495.3255, Found 495.3257

DC. HRMS Calc'd. 467.2442, Found 467.2950

Table 35

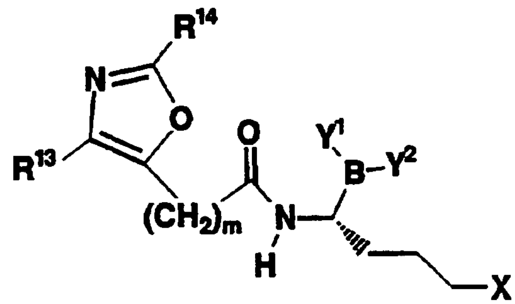


Ex	X	R^{13}	Y^1Y^2	Phys. Data
		m=1		
4299	CH_2NH_2	$PhCH_2$	(+)-pin	
4300	CH_2NH_2	$PhCH_2$	OH, OH	
4301	NH(C=NH)NH_2	$PhCH_2$	(+)-pin	
4302	NH(C=NH)NH_2	$PhCH_2$	OH, OH	
4303	OMe	$PhCH_2$	(+)-pin	
4304	OMe	$PhCH_2$	OH, OH	
4305	NH(C=NH)H	$PhCH_2$	(+)-pin	
4306	NH(C=NH)H	$PhCH_2$	OH, OH	
4307	CH_2NH_2	$PhCH_2CH_2$	(+)-pin	DE
4308	CH_2NH_2	$PhCH_2CH_2$	OH, OH	
4309	NH(C=NH)NH_2	$PhCH_2CH_2$	(+)-pin	
4310	NH(C=NH)NH_2	$PhCH_2CH_2$	OH, OH	
4311	OMe	$PhCH_2CH_2$	(+)-pin	
4312	OMe	$PhCH_2CH_2$	OH, OH	
4313	NH(C=NH)H	$PhCH_2CH_2$	(+)-pin	
4314	NH(C=NH)H	$PhCH_2CH_2$	OH, OH	
4315	CH_2NH_2	Ph	(+)-pin	
4316	CH_2NH_2	Ph	OH, OH	
4317	NH(C=NH)NH_2	Ph	(+)-pin	
4318	NH(C=NH)NH_2	Ph	OH, OH	
4319	OMe	Ph	(+)-pin	
4320	OMe	Ph	OH, OH	
4321	NH(C=NH)H	Ph	(+)-pin	
4322	NH(C=NH)H	Ph	OH, OH	
4323		m=2		
4324	CH_2NH_2	$PhCH_2$	(+)-pin	
4325	CH_2NH_2	$PhCH_2$	OH, OH	
4326	NH(C=NH)NH_2	$PhCH_2$	(+)-pin	

4327	NH(C=NH)NH_2	$PhCH_2$	OH, OH
4328	OMe	$PhCH_2$	(+)-pin
4329	OMe	$PhCH_2$	OH, OH
4330	NH(C=NH)H	$PhCH_2$	(+)-pin
4331	NH(C=NH)H	$PhCH_2$	OH, OH
4332	CH_2NH_2	$PhCH_2CH_2$	(+)-pin
4333	CH_2NH_2	$PhCH_2CH_2$	OH, OH
4334	NH(C=NH)NH_2	$PhCH_2CH_2$	(+)-pin
4335	NH(C=NH)NH_2	$PhCH_2CH_2$	OH, OH
4336	OMe	$PhCH_2CH_2$	(+)-pin
4337	OMe	$PhCH_2CH_2$	OH, OH
4338	NH(C=NH)H	$PhCH_2CH_2$	(+)-pin
4339	NH(C=NH)H	$PhCH_2CH_2$	OH, OH
4340	CH_2NH_2	Ph	(+)-pin
4341	CH_2NH_2	Ph	OH, OH
4342	NH(C=NH)NH_2	Ph	(+)-pin
4343	NH(C=NH)NH_2	Ph	OH, OH
4344	OMe	Ph	(+)-pin
4345	OMe	Ph	OH, OH
4346	NH(C=NH)H	Ph	(+)-pin
4347	NH(C=NH)H	Ph	OH, OH

DE. HRMS Calc'd. 495.3255, Found 495.3249

Table 36



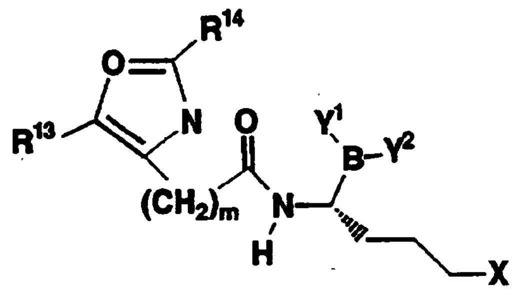
Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
		m=1			
4348	CH_2NH_2	$PhCH_2$	H	(+)-pin	
4349	CH_2NH_2	$PhCH_2$	methyl	(+)-pin	
4350	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin	
4351	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
4352	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin	
4353	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin	
4354	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	
4355	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin	
4356	CH_2NH_2	$PhCH_2$	H	OH, OH	
4357	CH_2NH_2	$PhCH_2$	methyl	OH, OH	
4358	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH	
4359	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH	
4360	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH	
4361	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH	
4362	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH	
4363	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH	
4364	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin	
4365	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin	
4366	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin	
4367	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin	
4368	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
4369	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin	

4370	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin
4371	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4372	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4373	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4374	NH(C=NH)NH_2	$PhCH_2$	H	H, OH
4375	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
4376	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
4377	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4378	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
4379	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4380	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
4381	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4382	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4383	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
4384		m=2		
4385	CH_2NH_2	$PhCH_2$	H	(+)-pin
4386	CH_2NH_2	$PhCH_2$	methyl	(+)-pin
4387	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin
4388	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4389	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin
4390	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4391	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4392	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4393	CH_2NH_2	$PhCH_2$	H	OH, OH
4394	CH_2NH_2	$PhCH_2$	methyl	OH, OH
4395	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH
4396	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH
4397	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH
4398	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4399	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4400	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
4401	NH(C=NH)NH_2	$PhCH_2$		(+)-pin
4402	NH(C=NH)NH_2	$PhCH_2$	ethyl	(+)-pin
4403	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin
4404	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin

4405	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4406	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin
4407	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin
4408	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4409	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4410	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4411	NH(C=NH)NH_2	$PhCH_2$		OH, OH
4412	NH(C=NH)NH_2	$PhCH_2$	ethyl	OH, OH
4413	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
4414	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4415	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
4416	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4417	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
4418	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4419	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4420	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
4421		m=0		
4422	CH_2NH_2	$PhCH_2$	H	(+)-pin
4423	CH_2NH_2	$PhCH_2$	methyl	(+)-pin
4424	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin
4425	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4426	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin
4427	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4428	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4429	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4430	CH_2NH_2	$PhCH_2$	H	OH, OH
4431	CH_2NH_2	$PhCH_2$	methyl	OH, OH
4432	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH
4433	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH
4434	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH
4435	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4436	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4437	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
4438	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin
4439	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin

4440	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2CN	(+)-pin
4441	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2CN$	(+)-pin
4442	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2COOH	(+)-pin
4443	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin
4444	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NC	(+)-pin
4445	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NO_2	(+)-pin
4446	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4447	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2SOCH_3	(+)-pin
4448	$NH(C{=}NH)NH_2$	$PhCH_2$	H	H, OH
4449	$NH(C{=}NH)NH_2$	$PhCH_2$	methyl	OH, OH
4450	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2CN	OH, OH
4451	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4452	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2COOH	OH, OH
4453	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4454	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NC	OH, OH
4455	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NO_2	OH, OH
4456	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4457	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2SOCH_3	OH, OH

Table 37



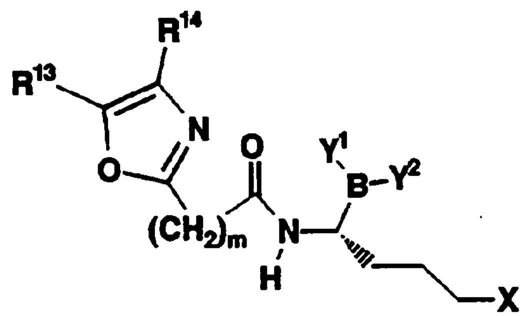
Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
		m=1			
4462	CH_2NH_2	$PhCH_2$	H	(+)-pin	
4463	CH_2NH_2	$PhCH_2$	methyl	(+)-pin	
4464	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin	
4465	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
4466	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin	
4467	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin	
4468	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	
4469	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin	
4470	CH_2NH_2	$PhCH_2$	H	OH, OH	
4471	CH_2NH_2	$PhCH_2$	methyl	OH, OH	
4472	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH	
4473	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH	
4474	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH	
4475	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH	
4476	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH	
4477	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH	
4478	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin	
4479	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin	
4480	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin	
4481	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin	
4482	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
4483	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin	
4484	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin	
4485	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin	

4486	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4487	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4488	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
4489	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
4490	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
4491	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4492	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
4493	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4494	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
4495	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4496	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4497	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
4498			m=2	
4499	CH_2NH_2	$PhCH_2$	H	(+)-pin
4500	CH_2NH_2	$PhCH_2$	methyl	(+)-pin
4501	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin
4502	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4503	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin
4504	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4505	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4506	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4507	CH_2NH_2	$PhCH_2$	H	OH, OH
4508	CH_2NH_2	$PhCH_2$	methyl	OH, OH
4509	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH
4510	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH
4511	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH
4512	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4513	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4514	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
4515	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin
4516	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin
4517	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin
4518	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin
4519	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4520	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin

4521	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin
4522	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4523	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4524	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4525	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
4526	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
4527	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
4528	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4529	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
4530	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4531	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
4532	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4533	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4534	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
		m=0		
4535	CH_2NH_2	$PhCH_2$	H	(+)-pin
4536	CH_2NH_2	$PhCH_2$	methyl	(+)-pin
4537	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin
4538	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4539	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin
4540	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4541	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4542	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4543	CH_2NH_2	$PhCH_2$	H	OH, OH
4544	CH_2NH_2	$PhCH_2$	methyl	OH, OH
4545	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH
4546	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH
4547	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH
4548	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4549	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4550	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
4551	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin
4552	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin
4553	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin
4554	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin

4555	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4556	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin
4557	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin
4558	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4559	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4560	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4561	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
4562	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
4563	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
4564	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4565	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
4566	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4567	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
4568	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4569	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4570	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH

Table 38

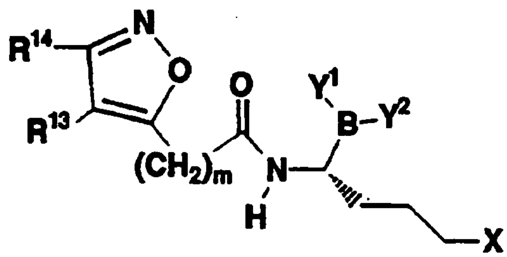


Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
		m=1			
4575	CH_2NH_2	$PhCH_2$	H	(+)-pin	
4576	CH_2NH_2	$PhCH_2$	methyl	(+)-pin	
4577	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin	
4578	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
4579	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin	
4580	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin	
4581	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	
4582	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin	
4583	CH_2NH_2	$PhCH_2$	H	OH, OH	
4584	CH_2NH_2	$PhCH_2$	methyl	OH, OH	
4585	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH	
4586	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH	
4587	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH	
4588	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH	
4589	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH	
4590	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH	
4591	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin	
4592	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin	
4593	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin	
4594	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin	
4595	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
4596	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin	
4597	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin	

4598	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4599	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4600	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4601	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
4602	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
4603	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
4604	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4605	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
4606	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4607	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
4608	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4609	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4610	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
		m=0		
4611	CH_2NH_2	$PhCH_2$	H	(+)-pin
4612	CH_2NH_2	$PhCH_2$	methyl	(+)-pin
4613	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin
4614	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4615	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin
4616	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4617	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4618	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4619	CH_2NH_2	$PhCH_2$	H	OH, OH
4620	CH_2NH_2	$PhCH_2$	methyl	OH, OH
4621	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH
4622	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH
4623	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH
4624	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4625	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4626	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
4627	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin
4628	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin
4629	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin
4630	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin
4631	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin

4632	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin
4633	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin
4634	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4635	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4636	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4637	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
4638	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
4639	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
4640	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4641	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
4642	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4643	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
4644	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4645	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4646	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH

Table 39

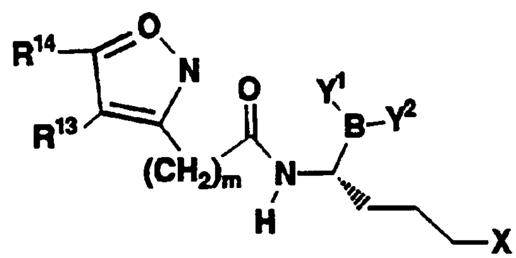


Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
			m=1		
4651	CH_2NH_2	$PhCH_2$	H	(+)-pin	
4652	CH_2NH_2	$PhCH_2$	methyl	(+)-pin	
4653	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin	
4654	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
4655	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin	
4656	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin	
4657	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	
4658	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin	
4659	CH_2NH_2	$PhCH_2$	H	OH, OH	
4660	CH_2NH_2	$PhCH_2$	methyl	OH, OH	
4661	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH	
4662	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH	
4663	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH	
4664	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH	
4665	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH	
4666	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH	
4667	$NH(C{=}NH)NH_2$	$PhCH_2$	H	(+)-pin	
4668	$NH(C{=}NH)NH_2$	$PhCH_2$	methyl	(+)-pin	
4669	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2CN	(+)-pin	
4670	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2CN$	(+)-pin	
4671	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2COOH	(+)-pin	
4672	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin	
4673	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NC	(+)-pin	
4674	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NO_2	(+)-pin	
4675	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	

4676	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4677	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
4678	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
4679	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
4680	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4681	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
4682	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4683	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
4684	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4685	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4686	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
			m=0	
4687	CH_2NH_2	$PhCH_2$	H	(+)-pin
4688	CH_2NH_2	$PhCH_2$	methyl	(+)-pin
4689	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin
4690	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4691	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin
4692	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4693	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4694	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4695	CH_2NH_2	$PhCH_2$	H	OH, OH
4696	CH_2NH_2	$PhCH_2$	methyl	OH, OH
4697	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH
4698	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH
4699	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH
4700	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4701	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4702	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
4703	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin
4704	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin
4705	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin
4706	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin
4707	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4708	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin
4709	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin

4710	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4711	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4712	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4713	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
4714	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
4715	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
4716	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4717	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
4718	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4719	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
4720	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4721	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4722	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH

Table 40

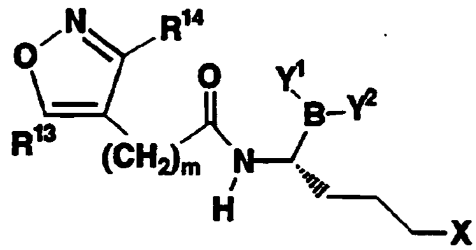


Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
		m=1			
4727	CH_2NH_2	$PhCH_2$	H	(+)-pin	
4728	CH_2NH_2	$PhCH_2$	methyl	(+)-pin	
4729	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin	
4730	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
4731	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin	
4732	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin	
4733	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	
4734	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin	
4735	CH_2NH_2	$PhCH_2$	H	OH, OH	
4736	CH_2NH_2	$PhCH_2$	methyl	OH, OH	
4737	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH	
4738	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH	
4739	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH	
4740	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH	
4741	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH	
4742	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH	
4743	$NH(C{=}NH)NH_2$	$PhCH_2$	H	(+)-pin	
4744	$NH(C{=}NH)NH_2$	$PhCH_2$	methyl	(+)-pin	
4745	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2CN	(+)-pin	
4746	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2CN$	(+)-pin	
4747	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2COOH	(+)-pin	
4748	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin	
4749	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NC	(+)-pin	
4750	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NO_2	(+)-pin	
4751	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	

4752	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4753	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
4754	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
4755	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
4756	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4757	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
4758	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4759	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
4760	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4761	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4762	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
		m=0		
4763	CH_2NH_2	$PhCH_2$	H	(+)-pin
4764	CH_2NH_2	$PhCH_2$	methyl	(+)-pin
4765	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin
4766	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4767	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin
4768	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4769	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4770	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4771	CH_2NH_2	$PhCH_2$	H	OH, OH
4772	CH_2NH_2	$PhCH_2$	methyl	OH, OH
4773	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH
4774	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH
4775	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH
4776	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4777	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4778	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
4779	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin
4780	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin
4781	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin
4782	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin
4783	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4784	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin
4785	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin

4786	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4787	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4788	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4789	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
4790	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
4791	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
4792	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4793	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
4794	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4795	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
4796	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4797	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4798	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH

Table 41

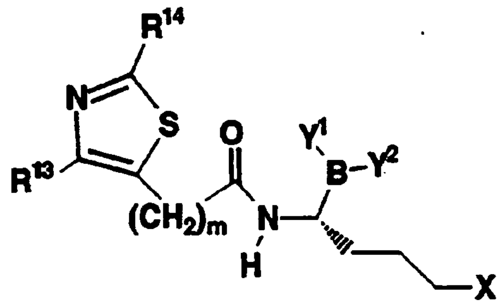


Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
			m=1		
4803	CH_2NH_2	$PhCH_2$	H	(+)-pin	
4804	CH_2NH_2	$PhCH_2$	methyl	(+)-pin	
4805	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin	
4806	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
4807	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin	
4808	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin	
4809	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	
4810	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin	
4811	CH_2NH_2	$PhCH_2$	H	OH, OH	
4812	CH_2NH_2	$PhCH_2$	methyl	OH, OH	
4813	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH	
4814	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH	
4815	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH	
4816	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH	
4817	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH	
4818	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH	
4819	$NH(C{=}NH)NH_2$	$PhCH_2$	H	(+)-pin	
4820	$NH(C{=}NH)NH_2$	$PhCH_2$	methyl	(+)-pin	
4821	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2CN	(+)-pin	
4822	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2CN$	(+)-pin	
4823	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2COOH	(+)-pin	
4824	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin	
4825	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NC	(+)-pin	
4826	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NO_2	(+)-pin	
4827	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	

4828	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4829	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
4830	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
4831	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
4832	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4833	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
4834	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4835	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
4836	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4837	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4838	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
		m=0		
4839	CH_2NH_2	$PhCH_2$	H	(+)-pin
4840	CH_2NH_2	$PhCH_2$	methyl	(+)-pin
4841	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin
4842	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4843	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin
4844	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4845	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4846	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4847	CH_2NH_2	$PhCH_2$	H	OH, OH
4848	CH_2NH_2	$PhCH_2$	methyl	OH, OH
4849	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH
4850	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH
4851	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH
4852	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4853	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4854	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
4855	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin
4856	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin
4857	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin
4858	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin
4859	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4860	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin
4861	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin

4862	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4863	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4864	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4865	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
4866	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
4867	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
4868	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4869	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
4870	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4871	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
4872	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4873	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4874	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH

Table 42



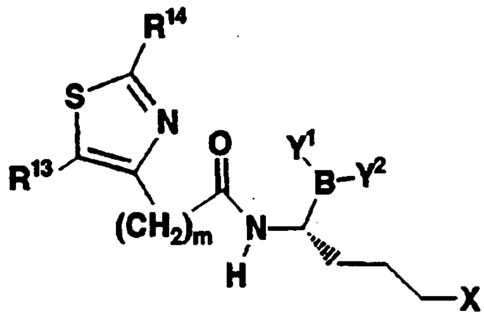
Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
		m=1			
4879	CH_2NH_2	$PhCH_2$	H	(+)-pin	
4880	CH_2NH_2	$PhCH_2$	methyl	(+)-pin	
4881	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin	
4882	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
4883	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin	
4884	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin	
4885	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	
4886	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin	
4887	CH_2NH_2	$PhCH_2$	H	OH, OH	
4888	CH_2NH_2	$PhCH_2$	methyl	OH, OH	
4889	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH	
4890	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH	
4891	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH	
4892	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH	
4893	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH	
4894	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH	
4895	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin	
4896	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin	
4897	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin	
4898	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin	
4899	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
4900	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin	
4901	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin	

4902	$NH(C=NH)NH_2$	$PhCH_2$	CH_2NO_2	(+)-pin
4903	$NH(C=NH)NH_2$	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4904	$NH(C=NH)NH_2$	$PhCH_2$	CH_2SOCH_3	(+)-pin
4905	$NH(C=NH)NH_2$	$PhCH_2$	H	OH, OH
4906	$NH(C=NH)NH_2$	$PhCH_2$	methyl	OH, OH
4907	$NH(C=NH)NH_2$	$PhCH_2$	CH_2CN	OH, OH
4908	$NH(C=NH)NH_2$	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4909	$NH(C=NH)NH_2$	$PhCH_2$	CH_2COOH	OH, OH
4910	$NH(C=NH)NH_2$	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4911	$NH(C=NH)NH_2$	$PhCH_2$	CH_2NC	OH, OH
4912	$NH(C=NH)NH_2$	$PhCH_2$	CH_2NO_2	OH, OH
4913	$NH(C=NH)NH_2$	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4914	$NH(C=NH)NH_2$	$PhCH_2$	CH_2SOCH_3	OH, OH
		m=2		
4915	CH_2NH_2	$PhCH_2$	H	(+)-pin
4916	CH_2NH_2	$PhCH_2$	methyl	(+)-pin
4917	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin
4918	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4919	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin
4920	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4921	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4922	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4923	CH_2NH_2	$PhCH_2$	H	OH, OH
4924	CH_2NH_2	$PhCH_2$	methyl	OH, OH
4925	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH
4926	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH
4927	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH
4928	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4929	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4930	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
4931	$NH(C=NH)NH_2$	$PhCH_2$	H	(+)-pin
4932	$NH(C=NH)NH_2$	$PhCH_2$	methyl	(+)-pin
4933	$NH(C=NH)NH_2$	$PhCH_2$	CH_2CN	(+)-pin
4934	$NH(C=NH)NH_2$	$PhCH_2$	$(CH_2)_2CN$	(+)-pin
4935	$NH(C=NH)NH_2$	$PhCH_2$	CH_2COOH	(+)-pin

4936	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin
4937	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin
4938	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4939	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4940	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4941	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
4942	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
4943	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
4944	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4945	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
4946	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4947	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
4948	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4949	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4950	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
		m=0		
4951	CH_2NH_2	$PhCH_2$	H	(+)-pin
4952	CH_2NH_2	$PhCH_2$	methyl	(+)-pin
4953	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin
4954	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin
4955	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin
4956	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
4957	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4958	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
4959	CH_2NH_2	$PhCH_2$	H	OH, OH
4960	CH_2NH_2	$PhCH_2$	methyl	OH, OH
4961	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH
4962	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH
4963	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH
4964	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH
4965	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4966	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
4967	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin
4968	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin
4969	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin

4970	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2CN$	(+)-pin
4971	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2COOH	(+)-pin
4972	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin
4973	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NC	(+)-pin
4974	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NO_2	(+)-pin
4975	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
4976	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2SOCH_3	(+)-pin
4977	$NH(C{=}NH)NH_2$	$PhCH_2$	H	OH, OH
4978	$NH(C{=}NH)NH_2$	$PhCH_2$	methyl	OH, OH
4979	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2CN	OH, OH
4980	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2CN$	OH, OH
4981	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2COOH	OH, OH
4982	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
4983	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NC	OH, OH
4984	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NO_2	OH, OH
4985	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2OH$	OH, OH
4986	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2SOCH_3	OH, OH

Table 43



Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
		m=1			
4991	CH_2NH_2	$PhCH_2$	H	(+)-pin	
4992	CH_2NH_2	$PhCH_2$	methyl	(+)-pin	
4993	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin	
4994	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
4995	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin	
4996	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin	
4997	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	
4998	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin	
4999	CH_2NH_2	$PhCH_2$	H	OH, OH	
5000	CH_2NH_2	$PhCH_2$	methyl	OH, OH	
5001	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH	
5002	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH	
5003	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH	
5004	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH	
5005	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH	
5006	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH	
5007	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin	
5008	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin	
5009	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin	
5010	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin	
5011	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
5012	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin	
5013	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin	

5014	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NO_2	(+)-pin
5015	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
5016	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2SOCH_3	(+)-pin
5017	$NH(C{=}NH)NH_2$	$PhCH_2$	H	OH, OH
5018	$NH(C{=}NH)NH_2$	$PhCH_2$	methyl	OH, OH
5019	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2CN	OH, OH
5020	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2CN$	OH, OH
5021	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2COOH	OH, OH
5022	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
5023	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NC	OH, OH
5024	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2NO_2	OH, OH
5025	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2OH$	OH, OH
5026	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2SOCH_3	OH, OH
		m=2		
5027	CH_2NH_2	$PhCH_2$	H	(+)-pin
5028	CH_2NH_2	$PhCH_2$	methyl	(+)-pin
5029	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin
5030	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin
5031	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin
5032	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
5033	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
5034	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
5035	CH_2NH_2	$PhCH_2$	H	OH, OH
5036	CH_2NH_2	$PhCH_2$	methyl	OH, OH
5037	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH
5038	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH
5039	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH
5040	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH
5041	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
5042	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
5043	$NH(C{=}NH)NH_2$	$PhCH_2$	H	(+)-pin
5044	$NH(C{=}NH)NH_2$	$PhCH_2$	methyl	(+)-pin
5045	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2CN	(+)-pin
5046	$NH(C{=}NH)NH_2$	$PhCH_2$	$(CH_2)_2CN$	(+)-pin
5047	$NH(C{=}NH)NH_2$	$PhCH_2$	CH_2COOH	(+)-pin

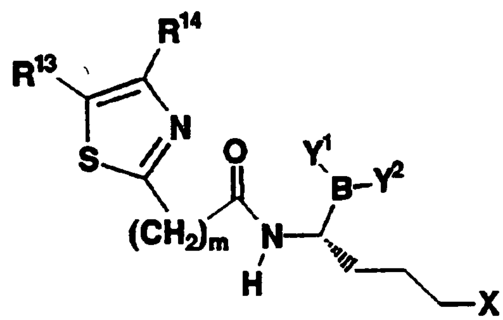
5048	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin
5049	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin
5050	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
5051	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
5052	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
5053	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
5054	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
5055	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
5056	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
5057	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
5058	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
5059	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
5060	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
5061	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
5062	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH

m=0

5063	CH_2NH_2	$PhCH_2$	H	(+)-pin
5064	CH_2NH_2	$PhCH_2$	methyl	(+)-pin
5065	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin
5066	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin
5067	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin
5068	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
5069	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
5070	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
5071	CH_2NH_2	$PhCH_2$	H	OH, OH
5072	CH_2NH_2	$PhCH_2$	methyl	OH, OH
5073	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH
5074	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH
5075	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH
5076	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH
5077	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
5078	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
5079	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin
5080	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin
5081	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin

5082	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin
5083	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin
5084	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin
5085	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin
5086	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
5087	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
5088	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
5089	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
5090	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
5091	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
5092	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
5093	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
5094	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
5095	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
5096	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
5097	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
5098	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH

Table 44



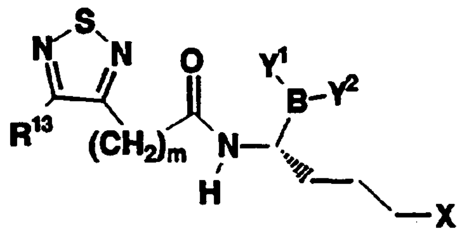
Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
		m=1			
5103	CH_2NH_2	$PhCH_2$	H	(+)-pin	
5104	CH_2NH_2	$PhCH_2$	methyl	(+)-pin	
5105	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin	
5106	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
5107	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin	
5108	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin	
5109	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin	
5110	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin	
5111	CH_2NH_2	$PhCH_2$	H	OH, OH	
5112	CH_2NH_2	$PhCH_2$	methyl	OH, OH	
5113	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH	
5114	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH	
5115	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH	
5116	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH	
5117	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH	
5118	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH	
5119	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin	
5120	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin	
5121	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin	
5122	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin	
5123	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin	
5124	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin	
5125	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin	

5126	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
5127	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
5128	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
5129	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
5130	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
5131	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
5132	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
5133	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
5134	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
5135	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
5136	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
5137	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
5138	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
		m=2		
5139	CH_2NH_2	$PhCH_2$	H	(+)-pin
5140	CH_2NH_2	$PhCH_2$	methyl	(+)-pin
5141	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin
5142	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin
5143	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin
5144	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
5145	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
5146	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
5147	CH_2NH_2	$PhCH_2$	H	OH, OH
5148	CH_2NH_2	$PhCH_2$	methyl	OH, OH
5149	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH
5150	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH
5151	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH
5152	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH
5153	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
5154	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
5155	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin
5156	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin
5157	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin
5158	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin
5159	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin

5160	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin
5161	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin
5162	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
5163	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
5164	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
5165	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
5166	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
5167	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
5168	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
5169	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
5170	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
5171	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
5172	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
5173	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
5174	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
		m=0		
5175	CH_2NH_2	$PhCH_2$	H	(+)-pin
5176	CH_2NH_2	$PhCH_2$	methyl	(+)-pin
5177	CH_2NH_2	$PhCH_2$	CH_2CN	(+)-pin
5178	CH_2NH_2	$PhCH_2$	CH_2COOH	(+)-pin
5179	CH_2NH_2	$PhCH_2$	CH_2NC	(+)-pin
5180	CH_2NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
5181	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
5182	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
5183	CH_2NH_2	$PhCH_2$	H	OH, OH
5184	CH_2NH_2	$PhCH_2$	methyl	OH, OH
5185	CH_2NH_2	$PhCH_2$	CH_2CN	OH, OH
5186	CH_2NH_2	$PhCH_2$	CH_2COOH	OH, OH
5187	CH_2NH_2	$PhCH_2$	CH_2NC	OH, OH
5188	CH_2NH_2	$PhCH_2$	CH_2NO_2	OH, OH
5189	CH_2NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
5190	CH_2NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH
5191	NH(C=NH)NH_2	$PhCH_2$	H	(+)-pin
5192	NH(C=NH)NH_2	$PhCH_2$	methyl	(+)-pin
5193	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	(+)-pin

5194	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	(+)-pin
5195	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	(+)-pin
5196	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	(+)-pin
5197	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	(+)-pin
5198	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	(+)-pin
5199	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	(+)-pin
5200	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	(+)-pin
5201	NH(C=NH)NH_2	$PhCH_2$	H	OH, OH
5202	NH(C=NH)NH_2	$PhCH_2$	methyl	OH, OH
5203	NH(C=NH)NH_2	$PhCH_2$	CH_2CN	OH, OH
5204	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2CN$	OH, OH
5205	NH(C=NH)NH_2	$PhCH_2$	CH_2COOH	OH, OH
5206	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2COOH$	OH, OH
5207	NH(C=NH)NH_2	$PhCH_2$	CH_2NC	OH, OH
5208	NH(C=NH)NH_2	$PhCH_2$	CH_2NO_2	OH, OH
5209	NH(C=NH)NH_2	$PhCH_2$	$(CH_2)_2OH$	OH, OH
5210	NH(C=NH)NH_2	$PhCH_2$	CH_2SOCH_3	OH, OH

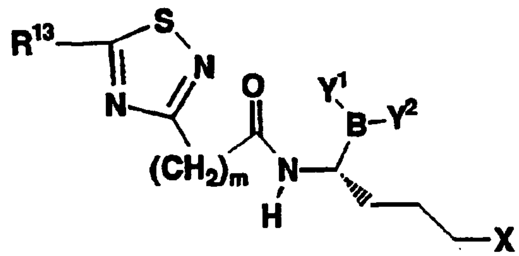
Table 45



Ex	X	R^{13}	Y^1Y^2	Phys. Data
		m=1		
5215	CH_2NH_2	$PhCH_2$	(+)-pin	
5216	CH_2NH_2	$PhCH_2$	OH, OH	
5217	$NH(C=NH)NH_2$	$PhCH_2$	(+)-pin	
5218	$NH(C=NH)NH_2$	$PhCH_2$	OH, OH	
5219	OMe	$PhCH_2$	(+)-pin	
5220	OMe	$PhCH_2$	OH, OH	
5221	NH(C=NH)H	$PhCH_2$	(+)-pin	
5222	NH(C=NH)H	$PhCH_2$	OH, OH	
5223	CH_2NH_2	$PhCH_2CH_2$	(+)-pin	
5224	CH_2NH_2	$PhCH_2CH_2$	OH, OH	
5225	$NH(C=NH)NH_2$	$PhCH_2CH_2$	(+)-pin	
5226	$NH(C=NH)NH_2$	$PhCH_2CH_2$	OH, OH	
5227	OMe	$PhCH_2CH_2$	(+)-pin	
5228	OMe	$PhCH_2CH_2$	OH, OH	
5229	NH(C=NH)H	$PhCH_2CH_2$	(+)-pin	
5230	NH(C=NH)H	$PhCH_2CH_2$	OH, OH	
5231	CH_2NH_2	Ph	(+)-pin	
5232	CH_2NH_2	Ph	OH, OH	
5233	$NH(C=NH)NH_2$	Ph	(+)-pin	
5234	$NH(C=NH)NH_2$	Ph	OH, OH	
5235	OMe	Ph	(+)-pin	
5236	OMe	Ph	OH, OH	
5237	NH(C=NH)H	Ph	(+)-pin	
5238	NH(C=NH)H	Ph	OH, OH	
		m=0		

5239	CH_2NH_2	$PhCH_2$	(+)-pin
5240	CH_2NH_2	$PhCH_2$	OH, OH
5241	$NH(C{=}NH)NH_2$	$PhCH_2$	(+)-pin
5242	$NH(C{=}NH)NH_2$	$PhCH_2$	OH, OH
5243	OMe	$PhCH_2$	(+)-pin
5244	OMe	$PhCH_2$	OH, OH
5245	NH(C=NH)H	$PhCH_2$	(+)-pin
5246	NH(C=NH)H	$PhCH_2$	OH, OH
5247	CH_2NH_2	$PhCH_2CH_2$	(+)-pin
5248	CH_2NH_2	$PhCH_2CH_2$	OH, OH
5249	$NH(C{=}NH)NH_2$	$PhCH_2CH_2$	(+)-pin
5250	$NH(C{=}NH)NH_2$	$PhCH_2CH_2$	OH, OH
5251	OMe	$PhCH_2CH_2$	(+)-pin
5252	OMe	$PhCH_2CH_2$	OH, OH
5253	NH(C=NH)H	$PhCH_2CH_2$	(+)-pin
5254	NH(C=NH)H	$PhCH_2CH_2$	OH, OH
5255	CH_2NH_2	Ph	(+)-pin
5256	CH_2NH_2	Ph	OH, OH
5257	$NH(C{=}NH)NH_2$	Ph	(+)-pin
5258	$NH(C{=}NH)NH_2$	Ph	OH, OH
5259	OMe	Ph	(+)-pin
5260	OMe	Ph	OH, OH
5261	NH(C=NH)H	Ph	(+)-pin
5262	NH(C=NH)H	Ph	OH, OH

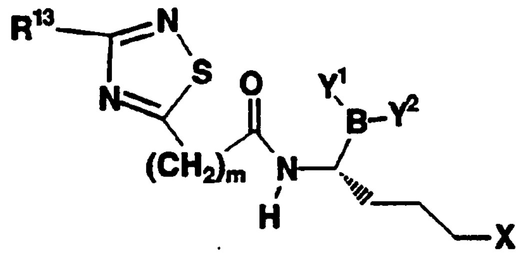
Table 46



Ex	X	R^{13}	Y^1Y^2	Phys. Data
		m=1		
5267	CH_2NH_2	$PhCH_2$	(+)-pin	
5268	CH_2NH_2	$PhCH_2$	OH, OH	
5269	$NH(C{=}NH)NH_2$	$PhCH_2$	(+)-pin	
5270	$NH(C{=}NH)NH_2$	$PhCH_2$	OH, OH	
5271	OMe	$PhCH_2$	(+)-pin	
5272	OMe	$PhCH_2$	OH, OH	
5273	$NH(C{=}NH)H$	$PhCH_2$	(+)-pin	
5274	$NH(C{=}NH)H$	$PhCH_2$	OH, OH	
5275	CH_2NH_2	$PhCH_2CH_2$	(+)-pin	
5276	CH_2NH_2	$PhCH_2CH_2$	OH, OH	
5277	$NH(C{=}NH)NH_2$	$PhCH_2CH_2$	(+)-pin	
5278	$NH(C{=}NH)NH_2$	$PhCH_2CH_2$	OH, OH	
5279	OMe	$PhCH_2CH_2$	(+)-pin	
5280	OMe	$PhCH_2CH_2$	OH, OH	
5281	$NH(C{=}NH)H$	$PhCH_2CH_2$	(+)-pin	
5282	$NH(C{=}NH)H$	$PhCH_2CH_2$	OH, OH	
5283	CH_2NH_2	Ph	(+)-pin	
5284	CH_2NH_2	Ph	OH, OH	
5285	$NH(C{=}NH)NH_2$	Ph	(+)-pin	
5286	$NH(C{=}NH)NH_2$	Ph	OH, OH	
5287	OMe	Ph	(+)-pin	
5288	OMe	Ph	OH, OH	
5289	$NH(C{=}NH)H$	Ph	(+)-pin	
5290	$NH(C{=}NH)H$	Ph	OH, OH	
		m=0		

5291	CH_2NH_2	$PhCH_2$	(+)-pin
5292	CH_2NH_2	$PhCH_2$	OH, OH
5293	NH(C=NH)NH_2	$PhCH_2$	(+)-pin
5294	NH(C=NH)NH_2	$PhCH_2$	OH, OH
5295	OMe	$PhCH_2$	(+)-pin
5296	OMe	$PhCH_2$	OH, OH
5297	NH(C=NH)H	$PhCH_2$	(+)-pin
5298	NH(C=NH)H	$PhCH_2$	OH, OH
5299	CH_2NH_2	$PhCH_2CH_2$	(+)-pin
5300	CH_2NH_2	$PhCH_2CH_2$	OH, OH
5301	NH(C=NH)NH_2	$PhCH_2CH_2$	(+)-pin
5302	NH(C=NH)NH_2	$PhCH_2CH_2$	OH, OH
5303	OMe	$PhCH_2CH_2$	(+)-pin
5304	OMe	$PhCH_2CH_2$	OH, OH
5305	NH(C=NH)H	$PhCH_2CH_2$	(+)-pin
5306	NH(C=NH)H	$PhCH_2CH_2$	OH, OH
5307	CH_2NH_2	Ph	(+)-pin
5308	CH_2NH_2	Ph	OH, OH
5309	NH(C=NH)NH_2	Ph	(+)-pin
5310	NH(C=NH)NH_2	Ph	OH, OH
5311	OMe	Ph	(+)-pin
5312	OMe	Ph	OH, OH
5313	NH(C=NH)H	Ph	(+)-pin
5314	NH(C=NH)H	Ph	OH, OH

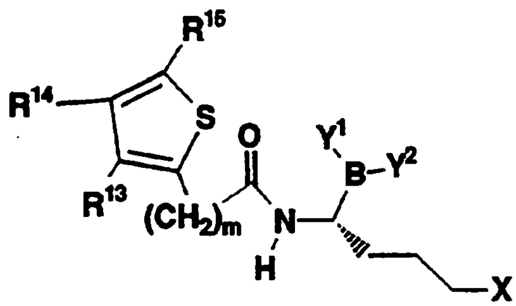
Table 47



Ex	X	R^{13}	Y^1Y^2	Phys . Data
		m=1		
5319	CH_2NH_2	$PhCH_2$	(+)-pin	
5320	CH_2NH_2	$PhCH_2$	OH, OH	
5321	$NH(C{=}NH)NH_2$	$PhCH_2$	(+)-pin	
5322	$NH(C{=}NH)NH_2$	$PhCH_2$	OH, OH	
5323	OMe	$PhCH_2$	(+)-pin	
5324	OMe	$PhCH_2$	OH, OH	
5325	NH(C=NH)H	$PhCH_2$	(+)-pin	
5326	NH(C=NH)H	$PhCH_2$	OH, OH	
5327	CH_2NH_2	$PhCH_2CH_2$	(+)-pin	
5328	CH_2NH_2	$PhCH_2CH_2$	OH, OH	
5329	$NH(C{=}NH)NH_2$	$PhCH_2CH_2$	(+)-pin	
5330	$NH(C{=}NH)NH_2$	$PhCH_2CH_2$	OH, OH	
5331	OMe	$PhCH_2CH_2$	(+)-pin	
5332	OMe	$PhCH_2CH_2$	OH, OH	
5333	NH(C=NH)H	$PhCH_2CH_2$	(+)-pin	
5334	NH(C=NH)H	$PhCH_2CH_2$	OH, OH	
5335	CH_2NH_2	Ph	(+)-pin	
5336	CH_2NH_2	Ph	OH, OH	
5337	$NH(C{=}NH)NH_2$	Ph	(+)-pin	
5338	$NH(C{=}NH)NH_2$	Ph	OH, OH	
5339	OMe	Ph	(+)-pin	
5340	OMe	Ph	OH, OH	
5341	NH(C=NH)H	Ph	(+)-pin	
5342	NH(C=NH)H	Ph	OH, OH	
		m=0		

5343	CH_2NH_2	$PhCH_2$	(+)-pin
5344	CH_2NH_2	$PhCH_2$	OH, OH
5345	$NH(C{=}NH)NH_2$	$PhCH_2$	(+)-pin
5346	$NH(C{=}NH)NH_2$	$PhCH_2$	OH, OH
5347	OMe	$PhCH_2$	(+)-pin
5348	OMe	$PhCH_2$	OH, OH
5349	NH(C=NH)H	$PhCH_2$	(+)-pin
5350	NH(C=NH)H	$PhCH_2$	OH, OH
5351	CH_2NH_2	$PhCH_2CH_2$	(+)-pin
5352	CH_2NH_2	$PhCH_2CH_2$	OH, OH
5353	$NH(C{=}NH)NH_2$	$PhCH_2CH_2$	(+)-pin
5354	$NH(C{=}NH)NH_2$	$PhCH_2CH_2$	OH, OH
5355	OMe	$PhCH_2CH_2$	(+)-pin
5356	OMe	$PhCH_2CH_2$	OH, OH
5357	NH(C=NH)H	$PhCH_2CH_2$	(+)-pin
5358	NH(C=NH)H	$PhCH_2CH_2$	OH, OH
5359	CH_2NH_2	Ph	(+)-pin
5360	CH_2NH_2	Ph	OH, OH
5361	$NH(C{=}NH)NH_2$	Ph	(+)-pin
5362	$NH(C{=}NH)NH_2$	Ph	OH, OH
5363	OMe	Ph	(+)-pin
5364	OMe	Ph	OH, OH
5365	NH(C=NH)H	Ph	(+)-pin
5366	NH(C=NH)H	Ph	OH, OH

Table 48



Ex	X	R^{13}	R^{14}	R^{15}	Y^1Y^2	Phys. Data
				m=1		
5371	CH_2NH_2	$PhCH_2$	H	H	(+)-pin	
5372	CH_2NH_2	$PhCH_2$	H	methyl	(+)-pin	
5373	CH_2NH_2	$PhCH_2$	H	CH_2CN	(+)-pin	
5374	CH_2NH_2	$PhCH_2$	H	CH_2COOH	(+)-pin	
5375	CH_2NH_2	$PhCH_2$	H	CH_2NC	(+)-pin	
5376	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	(+)-pin	
5377	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin	
5378	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	(+)-pin	
5379	CH_2NH_2	$PhCH_2$	H	H	OH, OH	
5380	CH_2NH_2	$PhCH_2$	H	methyl	OH, OH	
5381	CH_2NH_2	$PhCH_2$	H	CH_2CN	OH, OH	
5382	CH_2NH_2	$PhCH_2$	H	CH_2COOH	OH, OH	
5383	CH_2NH_2	$PhCH_2$	H	CH_2NC	OH, OH	
5384	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	OH, OH	
5385	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH	
5386	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	OH, OH	
5387	$NH(C{=}NH)NH_2$	$PhCH_2$	H	H	(+)-pin	
5388	$NH(C{=}NH)NH_2$	$PhCH_2$	H	methyl	(+)-pin	
5389	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2CN	(+)-pin	
5390	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2COOH	(+)-pin	
5391	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NC	(+)-pin	
5392	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NO_2	(+)-pin	
5393	$NH(C{=}NH)NH_2$	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin	

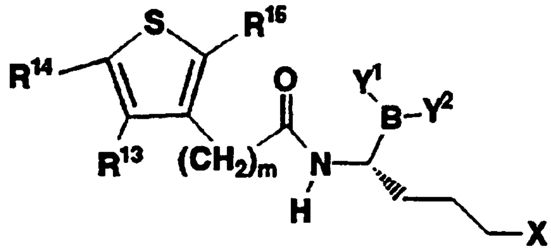
5394	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2SOCH_3	(+)-pin	
5395	$NH(C{=}NH)NH_2$	$PhCH_2$	H	H	OH, OH	
5396	$NH(C{=}NH)NH_2$	$PhCH_2$	H	methyl	OH, OH	
5397	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2CN	OH, OH	
5398	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2COOH	OH, OH	
5399	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NC	OH, OH	
5400	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NO_2	OH, OH	
5401	$NH(C{=}NH)NH_2$	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH	
5402	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2SOCH_3	OH, OH	
5403				m=0		
5404	$NH(C{=}NH)NH_2$	H	H	3-(t-butyl-O_2CNH)-Ph	(+)-pin	BS
5405	$NH(C{=}NH)NH_2$	H	H	3-(t-butyl-O_2CNH)-Ph	OH, OH	
5406	$NH(C{=}NH)NH_2$	H	H	3-(NH_2)-Ph	(+)-pin	
5407	$NH(C{=}NH)NH_2$	H	H	3-(NH_2)-Ph	OH, OH	
5408	$NH(C{=}NH)NH_2$	H	H	3-(CH_3SO_2NH)-Ph	(+)-pin	
5409	$NH(C{=}NH)NH_2$	H	H	3-(CH_3SO_2NH)-Ph	OH, OH	
5410	$NH(C{=}NH)NH_2$	H	methyl	Ph	(+)-pin	
5411	$NH(C{=}NH)NH_2$	H	methyl	Ph	OH, OH	
5412	$NH(C{=}NH)NH_2$	H	CH_2CN	Ph	(+)-pin	
5413	$NH(C{=}NH)NH_2$	H	CH_2CN	Ph	OH, OH	
5414	$NH(C{=}NH)NH_2$	H	methyl	3-(CH_3SO_2NH)-Ph	(+)-pin	
5415	$NH(C{=}NH)NH_2$	H	methyl	3-(CH_3SO_2NH)-Ph	OH, OH	
5416	$NH(C{=}NH)NH_2$	H	CH_3	2-(CH_3SO_2NH)-Ph	(+)-pin	
5417	$NH(C{=}NH)NH_2$	H	CH_3	2-(CH_3SO_2NH)-Ph	OH, OH	
5418	$NH(C{=}NH)NH_2$	H	CH_2CN	3-(CH_3SO_2NH)-Ph	(+)-pin	

5419	NH(C=NH)NH_2	H	CH_2CN	3-(CH_3SO_2NH)-Ph	OH, OH	
5420	NH(C=NH)NH_2	H	CH_2CN	2-(CH_3SO_2NH)-Ph	(+)-pin	
5421	NH(C=NH)NH_2	H	CH_2CN	2-(CH_3SO_2NH)-Ph	OH, OH	
5422	NH(C=NH)NH_2	H	CH_2COOH	3-(CH_3SO_2NH)-Ph	(+)-pin	
5423	NH(C=NH)NH_2	H	CH_2COOH	3-(CH_3SO_2NH)-Ph	OH, OH	
5424	NH(C=NH)NH_2	H	CH_2COOH	2-(CH_3SO_2NH)-Ph	(+)-pin	
5425	NH(C=NH)NH_2	H	CH_2COOH	2-(CH_3SO_2NH)-Ph	OH, OH	
5426	NH(C=NH)NH_2	H	H	3-(t-butylOCO-NH)-Ph	(+)-pin	BP

BP. MS (M+H)+: Calc 610, Found 610.

BS. MS (M+H)+: Calc 610, Found 610.

Table 49

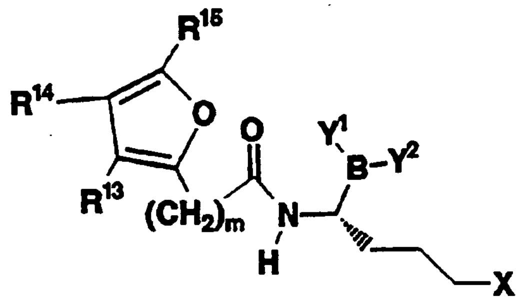


Ex	X	R^{13}	R^{14}	R^{15}	Y^1Y^2	Phys. Data
			m=1			
5431	CH_2NH_2	$PhCH_2$	H	H	(+)-pin	
5432	CH_2NH_2	$PhCH_2$	H	methyl	(+)-pin	
5433	CH_2NH_2	$PhCH_2$	H	CH_2CN	(+)-pin	
5434	CH_2NH_2	$PhCH_2$	H	CH_2COOH	(+)-pin	
5435	CH_2NH_2	$PhCH_2$	H	CH_2NC	(+)-pin	
5436	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	(+)-pin	
5437	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin	
5438	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	(+)-pin	
5439	CH_2NH_2	$PhCH_2$	H	H	OH, OH	
5440	CH_2NH_2	$PhCH_2$	H	methyl	OH, OH	
5441	CH_2NH_2	$PhCH_2$	H	CH_2CN	OH, OH	
5442	CH_2NH_2	$PhCH_2$	H	CH_2COOH	OH, OH	
5443	CH_2NH_2	$PhCH_2$	H	CH_2NC	OH, OH	
5444	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	OH, OH	
5445	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH	
5446	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	OH, OH	
5447	$NH(C{=}NH)NH_2$	$PhCH_2$	H	H	(+)-pin	
5448	$NH(C{=}NH)NH_2$	$PhCH_2$	H	methyl	(+)-pin	
5449	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2CN	(+)-pin	
5450	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2COOH	(+)-pin	
5451	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NC	(+)-pin	
5452	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NO_2	(+)-pin	
5453	$NH(C{=}NH)NH_2$	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin	
5454	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2SOCH_3	(+)-pin	
5455	$NH(C{=}NH)NH_2$	$PhCH_2$	H	H	OH, OH	

5456	NH(C=NH)NH_2	$PhCH_2$	H	methyl	OH, OH
5457	NH(C=NH)NH_2	$PhCH_2$	H	CH_2CN	OH, OH
5458	NH(C=NH)NH_2	$PhCH_2$	H	CH_2COOH	OH, OH
5459	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NC	OH, OH
5460	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NO_2	OH, OH
5461	NH(C=NH)NH_2	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH
5462	NH(C=NH)NH_2	$PhCH_2$	H	CH_2SOCH_3	OH, OH
			m=0		
5463	CH_2NH_2	$PhCH_2$	H	H	(+)-pin
5464	CH_2NH_2	$PhCH_2$	H	methyl	(+)-pin
5465	CH_2NH_2	$PhCH_2$	H	CH_2CN	(+)-pin
5466	CH_2NH_2	$PhCH_2$	H	CH_2COOH	(+)-pin
5465	CH_2NH_2	$PhCH_2$	H	CH_2NC	(+)-pin
5466	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	(+)-pin
5467	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin
5468	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	(+)-pin
5469	CH_2NH_2	$PhCH_2$	H	H	OH, OH
5470	CH_2NH_2	$PhCH_2$	H	methyl	OH, OH
5471	CH_2NH_2	$PhCH_2$	H	CH_2CN	OH, OH
5472	CH_2NH_2	$PhCH_2$	H	CH_2COOH	OH, OH
5473	CH_2NH_2	$PhCH_2$	H	CH_2NC	OH, OH
5474	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	OH, OH
5475	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH
5476	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	OH, OH
5477	NH(C=NH)NH_2	$PhCH_2$	H	H	(+)-pin
5478	NH(C=NH)NH_2	$PhCH_2$	H	methyl	(+)-pin
5479	NH(C=NH)NH_2	$PhCH_2$	H	CH_2CN	(+)-pin
5480	NH(C=NH)NH_2	$PhCH_2$	H	CH_2COOH	(+)-pin
5481	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NC	(+)-pin
5482	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NO_2	(+)-pin
5483	NH(C=NH)NH_2	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin
5484	NH(C=NH)NH_2	$PhCH_2$	H	CH_2SOCH_3	(+)-pin
5485	NH(C=NH)NH_2	$PhCH_2$	H	H	OH, OH
5486	NH(C=NH)NH_2	$PhCH_2$	H	methyl	OH, OH
5487	NH(C=NH)NH_2	$PhCH_2$	H	CH_2CN	OH, OH

5488	NH(C=NH)NH_2	$PhCH_2$	H	CH_2COOH	OH, OH
5489	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NC	OH, OH
5490	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NO_2	OH, OH
5491	NH(C=NH)NH_2	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH
5492	NH(C=NH)NH_2	$PhCH_2$	H	CH_2SOCH_3	OH, OH

Table 50



Ex	X	R^{13}	R^{14}	R^{15}	Y^1Y^2	Phys. Data
				m=1		
5497	CH_2NH_2	$PhCH_2$	H	H	(+)-pin	
5498	CH_2NH_2	$PhCH_2$	H	methyl	(+)-pin	
5499	CH_2NH_2	$PhCH_2$	H	CH_2CN	(+)-pin	
5500	CH_2NH_2	$PhCH_2$	H	CH_2COOH	(+)-pin	
5501	CH_2NH_2	$PhCH_2$	H	CH_2NC	(+)-pin	
5502	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	(+)-pin	
5503	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin	
5504	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	(+)-pin	
5505	CH_2NH_2	$PhCH_2$	H	H	OH, OH	
5506	CH_2NH_2	$PhCH_2$	H	methyl	OH, OH	
5507	CH_2NH_2	$PhCH_2$	H	CH_2CN	OH, OH	
5508	CH_2NH_2	$PhCH_2$	H	CH_2COOH	OH, OH	
5509	CH_2NH_2	$PhCH_2$	H	CH_2NC	OH, OH	
5510	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	OH, OH	
5511	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH	
5512	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	OH, OH	
5513	$NH(C{=}NH)NH_2$	$PhCH_2$	H	H	(+)-pin	
5514	$NH(C{=}NH)NH_2$	$PhCH_2$	H	methyl	(+)-pin	
5515	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2CN	(+)-pin	
5516	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2COOH	(+)-pin	
5517	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NC	(+)-pin	
5518	$NH(C{=}NH)NH_2$	$PhCH_2$	H	CH_2NO_2	(+)-pin	
5519	$NH(C{=}NH)NH_2$	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin	

5520	NH(C=NH)NH_2	$PhCH_2$	H	CH_2SOCH_3	(+)-pin	
5521	NH(C=NH)NH_2	$PhCH_2$	H	H	OH, OH	
5522	NH(C=NH)NH_2	$PhCH_2$	H	methyl	OH, OH	
5523	NH(C=NH)NH_2	$PhCH_2$	H	CH_2CN	OH, OH	
5524	NH(C=NH)NH_2	$PhCH_2$	H	CH_2COOH	OH, OH	
5525	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NC	OH, OH	
5526	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NO_2	OH, OH	
5527	NH(C=NH)NH_2	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH	
5528	NH(C=NH)NH_2	$PhCH_2$	H	CH_2SOCH_3	OH, OH	
				m=0		
5529	NH(C=NH)NH_2	H	H	3-(t-butyl-O_2CNH)-Ph	(+)-pin	BT
5530	NH(C=NH)NH_2	H	H	3-(t-butyl-O_2CNH)-Ph	OH, OH	
5531	NH(C=NH)NH_2	H	H	3-(NH_2)-Ph	(+)-pin	
5532	NH(C=NH)NH_2	H	H	3-(NH_2)-Ph	OH, OH	
5533	NH(C=NH)NH_2	H	H	3-(CH_3SO_2NH)-Ph	(+)-pin	
5534	NH(C=NH)NH_2	H	H	3-(CH_3SO_2NH)-Ph	OH, OH	
5535	NH(C=NH)NH_2	H	H	Ph	(+)-pin	BU
5536	NH(C=NH)NH_2	H	H	Ph	OH, OH	BV
5537	NH(C=NH)NH_2	H	CH_3	Ph	(+)-pin	
5538	NH(C=NH)NH_2	H	CH_3	Ph	OH, OH	
5539	NH(C=NH)NH_2	H	CH_2CN	Ph	(+)-pin	
5540	NH(C=NH)NH_2	H	CH_2CN	Ph	OH, OH	
5541	NH(C=NH)NH_2	H	CH_2COOH	Ph	(+)-pin	
5542	NH(C=NH)NH_2	H	CH_2COOH	Ph	OH, OH	
5543	NH(C=NH)NH_2	H	$CH_2SO_2NH_2$	Ph	(+)-pin	
5544	NH(C=NH)NH_2	H	$CH_2SO_2NH_2$	Ph	OH, OH	
5545	NH(C=NH)NH	H	CH_2CN	3-(CH_3SO_2NH)-Ph	(+)-pin	
5546	NH(C=NH)NH	H	CH_2CN	3-(CH_3SO_2NH)-Ph	OH, OH	

5547	NH(C=NH)NH	H	CH_2COOH	3-(CH_3SO_2NH)-Ph	(+)-pin	
5548	NH(C=NH)NH	H	CH_2COOH	3-(CH_3SO_2NH)-Ph	OH, OH	
5549	NH(C=NH)NH	H	CH_2COOH	2-(CH_3SO_2NH)-Ph	(+)-pin	
5550	NH(C=NH)NH	H	CH_2COOH	2-(CH_3SO_2NH)-Ph	OH, OH	
5551	NH(C=NH)NH_2	H	H	3-(t-butylOCO-NH)-Ph	(+)-pin	BO
5552	NH(C=NH)NH_2	H	H	Ph	(+)-pin	BQ
5553	NH(C=NH)NH_2	H	H	Ph	OH	BR

BO. MS $(M+H)^+$: Calc. 594, Found 594.

BQ. MS $(M+H)^+$: Calc. 479, Found 479.

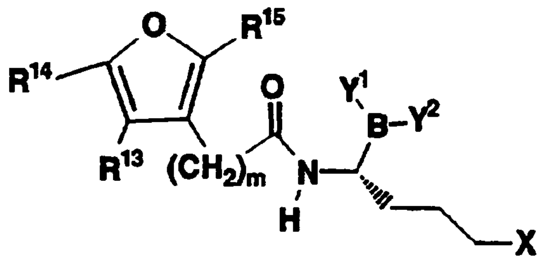
BS. MS $(M+H)^+$: Calc. 345, Found 345.

BT. MS $(M+H)^+$: Calc. 594, Found 594.

BU. MS $(M+H)^+$: Calc. 479, Found 479.

BV. MS $(M+H)^+$: Calc. 345, Found 345.

Table 51

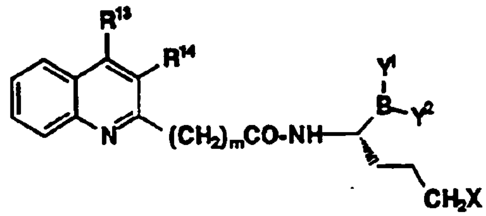


Ex	X	R^{13}	R^{14}	R^{15}	Y^1Y^2	Phys. Data
			m=1			
5558	CH_2NH_2	$PhCH_2$	H	H	(+)-pin	
5559	CH_2NH_2	$PhCH_2$	H	methyl	(+)-pin	
5560	CH_2NH_2	$PhCH_2$	H	CH_2CN	(+)-pin	
5561	CH_2NH_2	$PhCH_2$	H	CH_2COOH	(+)-pin	
5562	CH_2NH_2	$PhCH_2$	H	CH_2NC	(+)-pin	
5563	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	(+)-pin	
5564	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin	
5565	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	(+)-pin	
5566	CH_2NH_2	$PhCH_2$	H	H	OH, OH	
5567	CH_2NH_2	$PhCH_2$	H	methyl	OH, OH	
5568	CH_2NH_2	$PhCH_2$	H	CH_2CN	OH, OH	
5569	CH_2NH_2	$PhCH_2$	H	CH_2COOH	OH, OH	
5570	CH_2NH_2	$PhCH_2$	H	CH_2NC	OH, OH	
5571	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	OH, OH	
5572	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH	
5573	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	OH, OH	
5574	NH(C=NH)NH_2	$PhCH_2$	H	H	(+)-pin	
5575	NH(C=NH)NH_2	$PhCH_2$	H	methyl	(+)-pin	
5576	NH(C=NH)NH_2	$PhCH_2$	H	CH_2CN	(+)-pin	
5577	NH(C=NH)NH_2	$PhCH_2$	H	CH_2COOH	(+)-pin	
5578	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NC	(+)-pin	
5579	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NO_2	(+)-pin	
5580	NH(C=NH)NH_2	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin	
5581	NH(C=NH)NH_2	$PhCH_2$	H	CH_2SOCH_3	(+)-pin	

5582	NH(C=NH)NH_2	$PhCH_2$	H	H	OH, OH
5583	NH(C=NH)NH_2	$PhCH_2$	H	methyl	OH, OH
5584	NH(C=NH)NH_2	$PhCH_2$	H	CH_2CN	OH, OH
5585	NH(C=NH)NH_2	$PhCH_2$	H	CH_2COOH	OH, OH
5586	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NC	OH, OH
5587	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NO_2	OH, OH
5588	NH(C=NH)NH_2	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH
5589	NH(C=NH)NH_2	$PhCH_2$	H	CH_2SOCH_3	OH, OH
			m=0		
5590	CH_2NH_2	$PhCH_2$	H	H	(+)-pin
5591	CH_2NH_2	$PhCH_2$	H	methyl	(+)-pin
5592	CH_2NH_2	$PhCH_2$	H	CH_2CN	(+)-pin
5593	CH_2NH_2	$PhCH_2$	H	CH_2COOH	(+)-pin
5594	CH_2NH_2	$PhCH_2$	H	CH_2NC	(+)-pin
5595	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	(+)-pin
5596	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin
5597	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	(+)-pin
5598	CH_2NH_2	$PhCH_2$	H	H	OH, OH
5599	CH_2NH_2	$PhCH_2$	H	methyl	OH, OH
5600	CH_2NH_2	$PhCH_2$	H	CH_2CN	OH, OH
5601	CH_2NH_2	$PhCH_2$	H	CH_2COOH	OH, OH
5602	CH_2NH_2	$PhCH_2$	H	CH_2NC	OH, OH
5603	CH_2NH_2	$PhCH_2$	H	CH_2NO_2	OH, OH
5604	CH_2NH_2	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH
5605	CH_2NH_2	$PhCH_2$	H	CH_2SOCH_3	OH, OH
5606	NH(C=NH)NH_2	$PhCH_2$	H	H	(+)-pin
5607	NH(C=NH)NH_2	$PhCH_2$	H	methyl	(+)-pin
5608	NH(C=NH)NH_2	$PhCH_2$	H	CH_2CN	(+)-pin
5609	NH(C=NH)NH_2	$PhCH_2$	H	CH_2COOH	(+)-pin
5610	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NC	(+)-pin
5611	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NO_2	(+)-pin
5612	NH(C=NH)NH_2	$PhCH_2$	H	$(CH_2)_2OH$	(+)-pin
5613	NH(C=NH)NH_2	$PhCH_2$	H	CH_2SOCH_3	(+)-pin
5614	NH(C=NH)NH_2	$PhCH_2$	H	H	OH, OH
5615	NH(C=NH)NH_2	$PhCH_2$	H	methyl	OH, OH

5616	NH(C=NH)NH_2	$PhCH_2$	H	CH_2CN	OH, OH
5617	NH(C=NH)NH_2	$PhCH_2$	H	CH_2COOH	OH, OH
5618	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NC	OH, OH
5619	NH(C=NH)NH_2	$PhCH_2$	H	CH_2NO_2	OH, OH
5620	NH(C=NH)NH_2	$PhCH_2$	H	$(CH_2)_2OH$	OH, OH
5621	NH(C=NH)NH_2	$PhCH_2$	H	CH_2SOCH_3	OH, OH

Table 52



Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
			m=0		
5626	CH_2NH_2	H	H	(+)-pin	
5627	CH_2NH_2	H	methyl	(+)-pin	
5628	CH_2NH_2	H	H	OH, OH	
5629	CH_2NH_2	H	methyl	OH, OH	
5630	CH_2NH_2	H	CH_2CN	(+)-pin	
5631	CH_2NH_2	H	$(CH_2)_2COOH$	(+)-pin	
5632	CH_2NH_2	H	CH_2CN	OH, OH	
5633	CH_2NH_2	H	$(CH_2)_2COOH$	OH, OH	
5634	CH_2NH_2	H	CH_2COOMe	(+)-pin	
5635	CH_2NH_2	H	$(CH_2)COOH$	(+)-pin	
5636	CH_2NH_2	H	CH_2COOMe	OH, OH	
5637	CH_2NH_2	H	$(CH_2)COOH$	OH, OH	
5638	CH_2NH_2	H	$(CH_2)_2CN_4H$	(+)-pin	
5639	CH_2NH_2	H	$(CH_2)CN_4H$	(+)-pin	
5640	CH_2NH_2	H	$(CH_2)_2CN_4H$	OH, OH	
5641	CH_2NH_2	H	$(CH_2)CN_4H$	OH, OH	
5642	$NH(C{=}NH)NH_2$	H	H	(+)-pin	
5643	$NH(C{=}NH)NH_2$	H	methyl	(+)-pin	
5644	$NH(C{=}NH)NH_2$	H	H	OH, OH	
5645	$NH(C{=}NH)NH_2$	H	methyl	OH, OH	
5646	$NH(C{=}NH)NH_2$	H	CH_2CN	(+)-pin	
5647	$NH(C{=}NH)NH_2$	H	$(CH_2)_2COOH$	(+)-pin	
5648	$NH(C{=}NH)NH_2$	H	CH_2CN	OH, OH	
5649	$NH(C{=}NH)NH_2$	H	$(CH_2)_2COOH$	OH, OH	

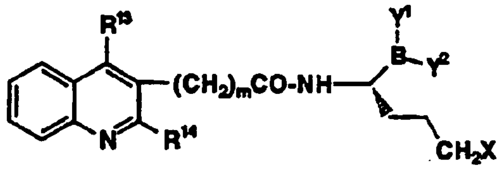
5650	NH(C=NH)NH_2	H	CH_2COOMe	(+)-pin
5651	NH(C=NH)NH_2	H	(CH_2)COOH	(+)-pin
5652	NH(C=NH)NH_2	H	CH_2COOMe	OH, OH
5653	NH(C=NH)NH_2	H	(CH_2)COOH	OH, OH
5654	NH(C=NH)NH_2	H	$(CH_2)_2CN_4H$	(+)-pin
5655	NH(C=NH)NH_2	H	(CH_2)CN_4H	(+)-pin
5656	NH(C=NH)NH_2	H	$(CH_2)_2CN_4H$	OH, OH
5657	NH(C=NH)NH_2	H	(CH_2)CN_4H	OH, OH
5658	OMe	H	H	(+)-pin
5659	OMe	H	H	OH, OH
5660	NH(C=NH)H	H	H	(+)-pin
5661	NH(C=NH)H	H	H	OH, OH
5662	CH_2NH_2	CH_2CN	H	(+)-pin
5663	CH_2NH_2	CH_2CN	H	OH, OH
5664	NH(C=NH)NH_2	$(CH_2)_2COOH$	H	(+)-pin
5665	NH(C=NH)NH_2	$(CH_2)_2COOH$	H	OH, OH
5666	OMe	CH_2COOMe	H	(+)-pin
5667	OMe	CH_2COOMe	H	OH, OH
5668	NH(C=NH)H	$(CH_2)_2CN_4H$	H	OH, OH
5669	NH(C=NH)H	$(CH_2)_2CN_4H$	H	(+)-pin
			m=1	
5670	CH_2NH_2	H	H	(+)-pin
5671	CH_2NH_2	H	methyl	(+)-pin
5672	CH_2NH_2	H	H	OH, OH
5673	CH_2NH_2	H	methyl	OH, OH
5674	CH_2NH_2	H	CH_2CN	(+)-pin
5675	CH_2NH_2	H	$(CH_2)_2COOH$	(+)-pin
5676	CH_2NH_2	H	CH_2CN	OH, OH
5677	CH_2NH_2	H	$(CH_2)_2COOH$	OH, OH
5678	CH_2NH_2	H	CH_2COOMe	(+)-pin
5679	CH_2NH_2	H	(CH_2)COOH	(+)-pin
5680	CH_2NH_2	H	CH_2COOMe	OH, OH
5681	CH_2NH_2	H	(CH_2)COOH	OH, OH
5682	CH_2NH_2	H	$(CH_2)_2CN_4H$	(+)-pin
5683	CH_2NH_2	H	(CH_2)CN_4H	(+)-pin

5684	CH_2NH_2	H	$(CH_2)_2CN_4H$	OH, OH
5685	CH_2NH_2	H	$(CH_2)CN_4H$	OH, OH
5686	$NH(C{=}NH)NH_2$	H	H	(+)-pin
5687	$NH(C{=}NH)NH_2$	H	methyl	(+)-pin
5688	$NH(C{=}NH)NH_2$	H	H	OH, OH
5689	$NH(C{=}NH)NH_2$	H	methyl	OH, OH
5690	$NH(C{=}NH)NH_2$	H	CH_2CN	(+)-pin
5691	$NH(C{=}NH)NH_2$	H	$(CH_2)_2COOH$	(+)-pin
5692	$NH(C{=}NH)NH_2$	H	CH_2CN	OH, OH
5693	$NH(C{=}NH)NH_2$	H	$(CH_2)_2COOH$	OH, OH
5694	$NH(C{=}NH)NH_2$	H	CH_2COOMe	(+)-pin
5695	$NH(C{=}NH)NH_2$	H	$(CH_2)COOH$	(+)-pin
5696	$NH(C{=}NH)NH_2$	H	CH_2COOMe	OH, OH
5697	$NH(C{=}NH)NH_2$	H	$(CH_2)COOH$	OH, OH
5698	$NH(C{=}NH)NH_2$	H	$(CH_2)_2CN_4H$	(+)-pin
5699	$NH(C{=}NH)NH_2$	H	$(CH_2)CN_4H$	(+)-pin
5700	$NH(C{=}NH)NH_2$	H	$(CH_2)_2CN_4H$	OH, OH
5701	$NH(C{=}NH)NH_2$	H	$(CH_2)CN_4H$	OH, OH
5702	OMe	H	H	(+)-pin
5703	OMe	H	H	OH, OH
5704	$NH(C{=}NH)H$	H	H	(+)-pin
5705	$NH(C{=}NH)H$	H	H	OH, OH
5706	CH_2NH_2	CH_2CN	H	(+)-pin
5707	CH_2NH_2	CH_2CN	H	OH, OH
5708	$NH(C{=}NH)NH_2$	$(CH_2)_2COOH$	H	(+)-pin
5709	$NH(C{=}NH)NH_2$	$(CH_2)_2COOH$	H	OH, OH
5710	OMe	CH_2COOMe	H	(+)-pin
5711	OMe	CH_2COOMe	H	OH, OH
5712	$NH(C{=}NH)H$	$(CH_2)_2CN_4H$	H	OH, OH
5713	$NH(C{=}NH)H$	$(CH_2)_2CN_4H$	H	(+)-pin
			m=0	
5714	CH_2NH_2	H	H	(+)-pin
5715	CH_2NH_2	H	methyl	(+)-pin
5716	CH_2NH_2	H	H	OH, OH
5717	CH_2NH_2	H	methyl	OH, OH

5718	CH_2NH_2	H	CH_2CN	(+)-pin
5719	CH_2NH_2	H	$(CH_2)_2COOH$	(+)-pin
5720	CH_2NH_2	H	CH_2CN	OH, OH
5721	CH_2NH_2	H	$(CH_2)_2COOH$	OH, OH
5722	CH_2NH_2	H	CH_2COOMe	(+)-pin
5723	CH_2NH_2	H	$(CH_2)COOH$	(+)-pin
5724	CH_2NH_2	H	CH_2COOMe	OH, OH
5725	CH_2NH_2	H	$(CH_2)COOH$	OH, OH
5726	CH_2NH_2	H	$(CH_2)_2CN_4H$	(+)-pin
5727	CH_2NH_2	H	$(CH_2)CN_4H$	(+)-pin
5728	CH_2NH_2	H	$(CH_2)_2CN_4H$	OH, OH
5729	CH_2NH_2	H	$(CH_2)CN_4H$	OH, OH
5730	$NH(C=NH)NH_2$	H	H	(+)-pin
5731	$NH(C=NH)NH_2$	H	methyl	(+)-pin
5732	$NH(C=NH)NH_2$	H	H	OH, OH
5733	$NH(C=NH)NH_2$	H	methyl	OH, OH
5734	$NH(C=NH)NH_2$	H	CH_2CN	(+)-pin
5735	$NH(C=NH)NH_2$	H	$(CH_2)_2COOH$	(+)-pin
5736	$NH(C=NH)NH_2$	H	CH_2CN	OH, OH
5737	$NH(C=NH)NH_2$	H	$(CH_2)_2COOH$	OH, OH
5738	$NH(C=NH)NH_2$	H	CH_2COOMe	(+)-pin
5739	$NH(C=NH)NH_2$	H	$(CH_2)COOH$	(+)-pin
5740	$NH(C=NH)NH_2$	H	CH_2COOMe	OH, OH
5741	$NH(C=NH)NH_2$	H	$(CH_2)COOH$	OH, OH
5742	$NH(C=NH)NH_2$	H	$(CH_2)_2CN_4H$	(+)-pin
5743	$NH(C=NH)NH_2$	H	$(CH_2)CN_4H$	(+)-pin
5744	$NH(C=NH)NH_2$	H	$(CH_2)_2CN_4H$	OH, OH
5745	$NH(C=NH)NH_2$	H	$(CH_2)CN_4H$	OH, OH
5746	OMe	H	H	(+)-pin
5747	OMe	H	H	OH, OH
5748	NH(C=NH)H	H	H	(+)-pin
5749	NH(C=NH)H	H	H	OH, OH
5750	CH_2NH_2	CH_2CN	H	(+)-pin
5751	CH_2NH_2	CH_2CN	H	OH, OH
5752	$NH(C=NH)NH_2$	$(CH_2)_2COOH$	H	(+)-pin

5753	NH(C=NH)NH_2	$(CH_2)_2COOH$	H	OH, OH
5754	OMe	CH_2COOMe	H	(+)-pin
5755	OMe	CH_2COOMe	H	OH, OH
5756	NH(C=NH)H	$(CH_2)_2CN_4H$	H	OH, OH
5757	NH(C=NH)H	$(CH_2)_2CN_4H$	H	(+)-pin

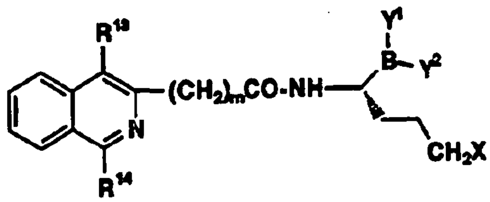
Table 53



and m=0

Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
5762	CH_2NH_2	H	H	(+)-pin	
5763	CH_2NH_2	H	H	OH, OH	
5764	$NH(C{=}NH)NH_2$	H	H	(+)-pin	
5765	$NH(C{=}NH)NH_2$	H	H	OH, OH	
5766	OMe	H	H	(+)-pin	
5767	OMe	H	H	OH, OH	
5768	NH(C=NH)H	H	H	OH, OH	
5769	NH(C=NH)H	H	H	(+)-pin	
5770	CH_2NH_2	CH_2CN	H	(+)-pin	
5771	CH_2NH_2	CH_2CN	H	OH, OH	
5772	$NH(C{=}NH)NH_2$	$(CH_2)COOH$	H	(+)-pin	
5773	$NH(C{=}NH)NH_2$	$(CH_2)COOH$	H	OH, OH	
5774	OMe	CH_2COOMe	H	(+)-pin	
5775	OMe	CH_2COOMe	H	OH, OH	
5776	NH(C=NH)H	$(CH_2)CN_4H$	H	OH, OH	
5777	NH(C=NH)H	$(CH_2)CN_4H$	H	(+)-pin	

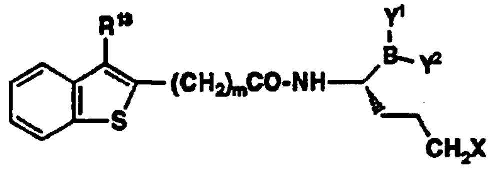
Table 54



and m=0

Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
5782	CH_2NH_2	CH_3	H	(+)-pin	
5783	CH_2NH_2	CH_3	H	OH, OH	
5784	$NH(C{=}NH)NH_2$	CH_3	H	(+)-pin	
5785	$NH(C{=}NH)NH_2$	CH_3	H	OH, OH	
5786	OMe	H	H	(+)-pin	
5787	OMe	H	H	OH, OH	
5788	NH(C=NH)H	H	H	OH, OH	
5789	NH(C=NH)H	H	H	(+)-pin	
5790	CH_2NH_2	CH_2CN	H	(+)-pin	
5791	CH_2NH_2	CH_2CN	H	OH, OH	
5792	$NH(C{=}NH)NH_2$	$(CH_2)COOH$	H	(+)-pin	
5793	$NH(C{=}NH)NH_2$	$(CH_2)COOH$	H	OH, OH	
5794	OMe	CH_2COOMe	H	(+)-pin	
5795	OMe	CH_2COOMe	H	OH, OH	
5796	NH(C=NH)H	$(CH_2)CN_4H$	H	OH, OH	
5797	NH(C=NH)H	$(CH_2)CN_4H$	H	(+)-pin	

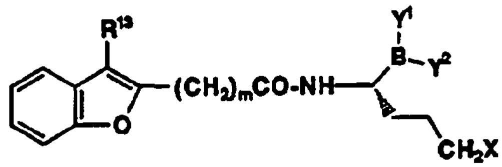
Table 55



and m=0

Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
5802	CH_2NH_2	H	H	(+)-pin	
5803	CH_2NH_2	H	H	OH, OH	
5804	$NH(C{=}NH)NH_2$	H	H	(+)-pin	
5805	$NH(C{=}NH)NH_2$	H	H	OH, OH	
5806	OMe	H	H	(+)-pin	
5807	OMe	H	H	OH, OH	
5808	NH(C=NH)H	H	H	OH, OH	
5809	NH(C=NH)H	H	H	(+)-pin	
5810	CH_2NH_2	CH_2CN	H	(+)-pin	
5811	CH_2NH_2	CH_2CN	H	OH, OH	
5812	$NH(C{=}NH)NH_2$	$(CH_2)COOH$	H	(+)-pin	
5813	$NH(C{=}NH)NH_2$	$(CH_2)COOH$	H	OH, OH	
5814	OMe	CH_2COOMe	H	(+)-pin	
5815	OMe	CH_2COOMe	H	OH, OH	
5816	NH(C=NH)H	$(CH_2)CN_4H$	H	OH, OH	
5817	NH(C=NH)H	$(CH_2)CN_4H$	H	(+)-pin	

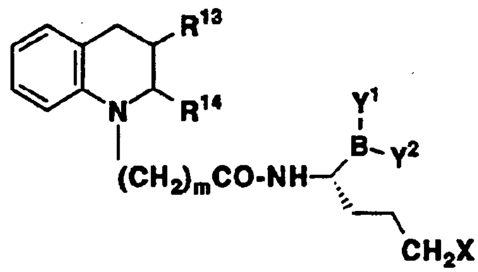
Table 56



and m=0

Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
5822	CH_2NH_2	H	H	(+)-pin	
5823	CH_2NH_2	H	H	OH, OH	
5824	$NH(C{=}NH)NH_2$	H	H	(+)-pin	
5825	$NH(C{=}NH)NH_2$	H	H	OH, OH	
5826	OMe	H	H	(+)-pin	
5827	OMe	H	H	OH, OH	
5828	NH(C=NH)H	H	H	OH, OH	
5829	NH(C=NH)H	H	H	(+)-pin	
5830	CH_2NH_2	CH_2CN	H	(+)-pin	
5831	CH_2NH_2	CH_2CN	H	OH, OH	
5832	$NH(C{=}NH)NH_2$	$(CH_2)COOH$	H	(+)-pin	
5833	$NH(C{=}NH)NH_2$	$(CH_2)COOH$	H	OH, OH	
5834	OMe	CH_2COOMe	H	(+)-pin	
5835	OMe	CH_2COOMe	H	OH, OH	
5836	NH(C=NH)H	$(CH_2)CN_4H$	H	OH, OH	
5837	NH(C=NH)H	$(CH_2)CN_4H$	H	(+)-pin	

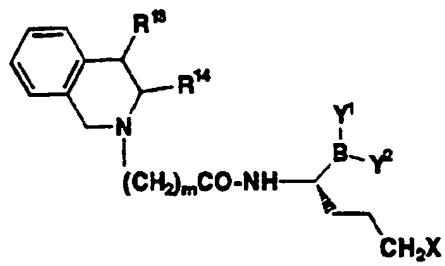
Table 57



Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
		m=1			
5842	CH_2NH_2	H	H	(+)-pin	
5843	CH_2NH_2	H	H	OH, OH	
5844	NH(C=NH)NH_2	H	H	(+)-pin	
5845	NH(C=NH)NH_2	H	H	OH, OH	
5846	OMe	H	H	(+)-pin	
5847	OMe	H	H	OH, OH	
5848	NH(C=NH)H	H	H	OH, OH	
5849	NH(C=NH)H	H	H	(+)-pin	
5850	CH_2NH_2	CH_2CN	H	(+)-pin	
5851	CH_2NH_2	CH_2CN	H	OH, OH	
5852	NH(C=NH)NH_2	(CH_2)COOH	H	(+)-pin	
5853	NH(C=NH)NH_2	(CH_2)COOH	H	OH, OH	
5854	OMe	CH_2COOMe	H	(+)-pin	
5855	OMe	CH_2COOMe	H	OH, OH	
5856	NH(C=NH)H	$(CH_2)CN_4H$	H	OH, OH	
5857	NH(C=NH)H	$(CH_2)CN_4H$	H	(+)-pin	
		m=0			
5858	CH_2NH_2	H	H	(+)-pin	
5859	CH_2NH_2	H	H	OH, OH	
5860	NH(C=NH)NH_2	H	H	(+)-pin	
5861	NH(C=NH)NH_2	H	H	OH, OH	
5862	OMe	H	H	(+)-pin	
5863	OMe	H	H	OH, OH	
5864	NH(C=NH)H	H	H	OH, OH	

5865	NH(C=NH)H	H	H	(+)-pin
5866	CH_2NH_2	CH_2CN	H	(+)-pin
5867	CH_2NH_2	CH_2CN	H	OH, OH
5868	NH(C=NH)NH_2	(CH_2)COOH	H	(+)-pin
5869	NH(C=NH)NH_2	(CH_2)COOH	H	OH, OH
5870	OMe	CH_2COOMe	H	(+)-pin
5871	OMe	CH_2COOMe	H	OH, OH
5872	NH(C=NH)H	(CH_2)CN_4H	H	OH, OH
5873	NH(C=NH)H	(CH_2)CN_4H	H	(+)-pin

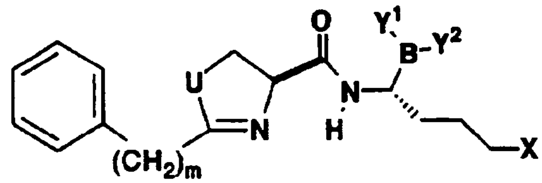
Table 58



Ex	X	R^{13}	R^{14}	Y^1Y^2	Phys. Data
		m=1			
5878	CH_2NH_2	H	H	(+)-pin	
5879	CH_2NH_2	H	H	OH, OH	
5880	NH(C=NH)NH_2	H	H	(+)-pin	
5881	NH(C=NH)NH_2	H	H	OH, OH	
5882	OMe	H	H	(+)-pin	
5883	OMe	H	H	OH, OH	
5884	NH(C=NH)H	H	H	OH, OH	
5885	NH(C=NH)H	H	H	(+)-pin	
5886	CH_2NH_2	CH_2CN	H	(+)-pin	
5887	CH_2NH_2	CH_2CN	H	OH, OH	
5888	NH(C=NH)NH_2	(CH_2)COOH	H	(+)-pin	
5889	NH(C=NH)NH_2	(CH_2)COOH	H	OH, OH	
5890	OMe	CH_2COOMe	H	(+)-pin	
5891	OMe	CH_2COOMe	H	OH, OH	
5892	NH(C=NH)H	$(CH_2)CN_4H$	H	OH, OH	
5893	NH(C=NH)H	$(CH_2)CN_4H$	H	(+)-pin	
		m=0			
5894	CH_2NH_2	H	H	(+)-pin	
5895	CH_2NH_2	H	H	OH, OH	
5896	NH(C=NH)NH_2	H	H	(+)-pin	
5897	NH(C=NH)NH_2	H	H	OH, OH	
5898	OMe	H	H	(+)-pin	
5899	OMe	H	H	OH, OH	
5900	NH(C=NH)H	H	H	OH, OH	

5901	NH(C=NH)H	H	H	(+)-pin
5902	CH_2NH_2	CH_2CN	H	(+)-pin
5903	CH_2NH_2	CH_2CN	H	OH, OH
5904	NH(C=NH)NH_2	(CH_2)COOH	H	(+)-pin
5905	NH(C=NH)NH_2	(CH_2)COOH	H	OH, OH
5906	OMe	CH_2COOMe	H	(+)-pin
5907	OMe	CH_2COOMe	H	OH, OH
5908	NH(C=NH)H	(CH_2)CN_4H	H	OH, OH
5909	NH(C=NH)H	(CH_2)CN_4H	H	(+)-pin

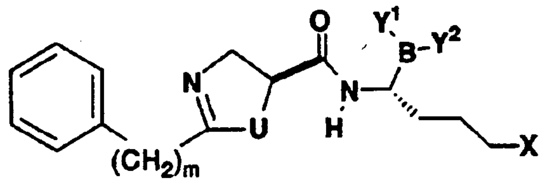
Table 59



Ex	X	U	Y^1Y^2	Phys. Data
		m=1		
5914	CH_2NH_2	S	(+)-pin	
5915	$NHC(=NH)NH_2$	S	(+)-pin	
5916	$SC(=NH)NH_2$	S	(+)-pin	
5917	CH_2NH_2	S	OH, OH	
5918	$NHC(=NH)NH_2$	S	OH, OH	
5919	$SC(=NH)NH_2$	S	OH, OH	
5920	CH_2NH_2	O	(+)-pin	
5921	$NHC(=NH)NH_2$	O	(+)-pin	
5922	$SC(=NH)NH_2$	O	(+)-pin	
5923	CH_2NH_2	O	OH, OH	
5924	$NHC(=NH)NH_2$	O	OH, OH	
5925	$SC(=NH)NH_2$	O	OH, OH	
		m=2		
5926	CH_2NH_2	S	(+)-pin	CA
5927	$NHC(=NH)NH_2$	S	(+)-pin	
5928	$SC(=NH)NH_2$	S	(+)-pin	
5929	CH_2NH_2	S	OH, OH	
5930	$NHC(=NH)NH_2$	S	OH, OH	
5931	$SC(=NH)NH_2$	S	OH, OH	
5932	CH_2NH_2	O	(+)-pin	
5933	$NHC(=NH)NH_2$	O	(+)-pin	
5934	$SC(=NH)NH_2$	O	(+)-pin	
5935	CH_2NH_2	O	OH, OH	
5936	$NHC(=NH)NH_2$	O	OH, OH	
5937	$SC(=NH)NH_2$	O	OH, OH	

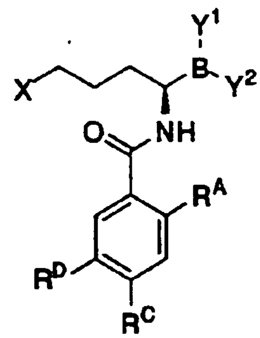
CA: HRMS Calc.: 543.2635, Found: 543.2643

Table 60



Ex	X	U	Y^1Y^2	Phys. Data
		m=1		
5942	CH_2NH_2	S	(+)-pin	
5943	$NHC(=NH)NH_2$	S	(+)-pin	
5944	$SC(=NH)NH_2$	S	(+)-pin	
5945	CH_2NH_2	S	OH, OH	
5946	$NHC(=NH)NH_2$	S	OH, OH	
5947	$SC(=NH)NH_2$	S	OH, OH	
5948	CH_2NH_2	O	(+)-pin	
5949	$NHC(=NH)NH_2$	O	(+)-pin	
5950	$SC(=NH)NH_2$	O	(+)-pin	
5951	CH_2NH_2	O	OH, OH	
5952	$NHC(=NH)NH_2$	O	OH, OH	
5953	$SC(=NH)NH_2$	O	OH, OH	
		m=2		
5954	CH_2NH_2	S	(+)-pin	
5955	$NHC(=NH)NH_2$	S	(+)-pin	
5956	$SC(=NH)NH_2$	S	(+)-pin	
5957	CH_2NH_2	S	OH, OH	
5958	$NHC(=NH)NH_2$	S	OH, OH	
5959	$SC(=NH)NH_2$	S	OH, OH	
5960	CH_2NH_2	O	(+)-pin	
5961	$NHC(=NH)NH_2$	O	(+)-pin	
5962	$SC(=NH)NH_2$	O	(+)-pin	
5963	CH_2NH_2	O	OH, OH	
5964	$NHC(=NH)NH_2$	O	OH, OH	
5965	$SC(=NH)NH_2$	O	OH, OH	

Table 61



Ex	X	R^A	R^C	R^D	Y^1,Y^2	Phys Data
5970	$NHC(NH)NH_2$	Me	Ph	OMe	(+)-pin	
5971	$NHC(NH)NH_2$	Me	Ph	$CONH_2$	(+)-pin	
5972	$NHC(NH)NH_2$	Me	Ph	F	(+)-pin	
5973	$NHC(NH)NH_2$	Me	Ph	CF_3	(+)-pin	
5974	$NHC(NH)NH_2$	Me	Ph	Cl	(+)-pin	
5975	$NHC(NH)NH_2$	Me	Ph	OH	(+)-pin	
5976	$NHC(NH)NH_2$	Me	$4-C_6H_4CO_2H$	OMe	(+)-pin	
5977	$NHC(NH)NH_2$	Me	$4-C_6H_4CO_2H$	CONH2	(+)-pin	
5978	$NHC(NH)NH_2$	Me	$4-C_6H_4CO_2H$	F	(+)-pin	
5979	$NHC(NH)NH_2$	Me	$4-C_6H_4CO_2H$	CF_3	(+)-pin	
5980	$NHC(NH)NH_2$	Me	$4-C_6H_4CO_2H$	Cl	(+)-pin	
5981	$NHC(NH)NH_2$	Me	$4-C_6H_4CO_2H$	OH	(+)-pin	
5982	$SC(NH)NH_2$	Me	Ph	OMe	(+)-pin	
5983	$SC(NH)NH_2$	Me	Ph	$CONH_2$	(+)-pin	
5984	$SC(NH)NH_2$	Me	Ph	F	(+)-pin	
5985	$SC(NH)NH_2$	Me	Ph	CF_3	(+)-pin	
5986	$SC(NH)NH_2$	Me	Ph	Cl	(+)-pin	
5987	$SC(NH)NH_2$	Me	Ph	OH	(+)-pin	
5988	$SC(NH)NH_2$	Me	$4-C_6H_4CO_2H$	OMe	(+)-pin	
5989	$SC(NH)NH_2$	Me	$4-C_6H_4CO_2H$	$CONH_2$	(+)-pin	
5990	$SC(NH)NH_2$	Me	$4-C_6H_4CO_2H$	F	(+)-pin	

5991	SC(NH)NH_2	Me	4-$C_6H_4CO_2H$	CF_3	(+)-pin
5992	SC(NH)NH_2	Me	4-$C_6H_4CO_2H$	Cl	(+)-pin
5993	SC(NH)NH_2	Me	4-$C_6H_4CO_2H$	OH	(+)-pin
5994	CH_2NH_2	Me	Ph	OMe	(+)-pin
5995	CH_2NH_2	Me	Ph	$CONH_2$	(+)-pin
5996	CH_2NH_2	Me	Ph	F	(+)-pin
5997	CH_2NH_2	Me	Ph	CF_3	(+)-pin
5998	CH_2NH_2	Me	Ph	Cl	(+)-pin
5999	CH_2NH_2	Me	Ph	OH	(+)-pin
6000	CH_2NH_2	Me	4-$C_6H_4CO_2H$	OMe	(+)-pin
6001	CH_2NH_2	Me	4-$C_6H_4CO_2H$	CONH2	(+)-pin
6002	CH_2NH_2	Me	4-$C_6H_4CO_2H$	F	(+)-pin
6003	CH_2NH_2	Me	4-$C_6H_4CO_2H$	CF_3	(+)-pin
6004	CH_2NH_2	Me	4-$C_6H_4CO_2H$	Cl	(+)-pin
6005	CH_2NH_2	Me	4-$C_6H_4CO_2H$	OH	(+)-pin
6006	NHC(NH)NH_2	Me	Ph	OMe	OH,OH
6007	NHC(NH)NH_2	Me	Ph	$CONH_2$	OH,OH
6008	NHC(NH)NH_2	Me	Ph	F	OH,OH
6009	NHC(NH)NH_2	Me	Ph	CF_3	OH,OH
6010	NHC(NH)NH_2	Me	Ph	Cl	OH,OH
6011	NHC(NH)NH_2	Me	Ph	OH	OH,OH
6012	NHC(NH)NH_2	Me	4-$C_6H_4CO_2H$	OMe	OH,OH
6013	NHC(NH)NH_2	Me	4-$C_6H_4CO_2H$	CONH2	OH,OH
6014	NHC(NH)NH_2	Me	4-$C_6H_4CO_2H$	F	OH,OH
6015	NHC(NH)NH_2	Me	4-$C_6H_4CO_2H$	CF_3	OH,OH
6016	NHC(NH)NH_2	Me	4-$C_6H_4CO_2H$	Cl	OH,OH
6017	NHC(NH)NH_2	Me	4-$C_6H_4CO_2H$	OH	OH,OH
6018	SC(NH)NH_2	Me	Ph	OMe	OH,OH
6019	SC(NH)NH_2	Me	Ph	$CONH_2$	OH,OH
6020	SC(NH)NH_2	Me	Ph	F	OH,OH
6021	SC(NH)NH_2	Me	Ph	CF_3	OH,OH
6022	SC(NH)NH_2	Me	Ph	Cl	OH,OH
6023	SC(NH)NH_2	Me	Ph	OH	OH,OH
6024	SC(NH)NH_2	Me	4-$C_6H_4CO_2H$	OMe	OH,OH
6025	SC(NH)NH_2	Me	4-$C_6H_4CO_2H$	$CONH_2$	OH,OH

6026	SC(NH)NH$_2$	Me	4-$C_6H_4CO_2H$	F	OH,OH
6027	SC(NH)NH$_2$	Me	4-$C_6H_4CO_2H$	CF_3	OH,OH
6028	SC(NH)NH$_2$	Me	4-$C_6H_4CO_2H$	Cl	OH,OH
6029	SC(NH)NH$_2$	Me	4-$C_6H_4CO_2H$	OH	OH,OH
6030	CH_2NH_2	Me	Ph	OMe	OH,OH
6031	CH_2NH_2	Me	Ph	$CONH_2$	OH,OH
6032	CH_2NH_2	Me	Ph	F	OH,OH
6033	CH_2NH_2	Me	Ph	CF_3	OH,OH
6034	CH_2NH_2	Me	Ph	Cl	OH,OH
6035	CH_2NH_2	Me	Ph	OH	OH,OH
6036	CH_2NH_2	Me	4-$C_6H_4CO_2H$	OMe	OH,OH
6037	CH_2NH_2	Me	4-$C_6H_4CO_2H$	CONH2	OH,OH
6038	CH_2NH_2	Me	4-$C_6H_4CO_2H$	F	OH,OH
6039	CH_2NH_2	Me	4-$C_6H_4CO_2H$	CF_3	OH,OH
6040	CH_2NH_2	Me	4-$C_6H_4CO_2H$	Cl	OH,OH
6041	CH_2NH_2	Me	4-$C_6H_4CO_2H$	OH	OH,OH

Utility

The compounds of formula (I) are useful as inhibitors of trypsin-like enzymes, notably human thrombin, Factor VIIa, Factor IXa, Factor Xa, plasma kallikrein and plasmin. Because of their inhibitory action, these compounds are indicated for use in the prevention or treatment of physiological reactions catalyzed by the aforesaid enzymes such as blood coagulation and inflammation. These compounds are also useful as anticoagulants for the processing of blood for therapeutic or diagnostic purposes or for the production of blood products or fragments, since contact of blood with the surfaces commonly used for blood collection and storage causes activation of coagulation leading to thrombin formation and clot formation.

The effectiveness of compounds of the present invention as inhibitors of blood coagulation proteases was determined using purified human proteases and synthetic substrates following procedures similar to those described in Kettner et al. (1990).

For these assays, the rate of enzymatic (thrombin, Factor Xa, and Factor VIIa) hydrolysis of chromogenic substrates (S2238 (H-*D*-Phe-Pip-Arg-pNA), S2222, and S2288, respectively; Kabi Pharmacia, Franklin, OH) was measured both in the absence and presence of compounds of the present invention. Hydrolysis of the substrate resulted in the release of pNA, which was monitored spectrophotometrically by measuring the increase in absorbance at 405 nM. A decrease in the rate of absorbance change at 405 nm in the presence of inhibitor is indicative of enzyme inhibition. The results of this assay are expressed as inhibitory constant, K_i.

Thrombin and Xa determinations were made in 0.10 M sodium phosphate buffer, pH 7.5, containing 0.20 M NaCl, and 0.5 % PEG 8000. VIIa determinations were made in 0.05 M tris buffer, pH 7.6, containing 0.10 M NaCl, 4 mM

$CaCl_2$, and 0.1% bovine serum albumin. The Michaelis constant, K_m, for substrate hydrolysis was determined at 25 °C using the method of Lineweaver and Burk.

Values of K_i were determined by allowing 0.2 - 0.5 nM human thrombin or human factor Xa (Enzyme Research Laboratories, South Bend, IN) , or 50 nM human factor VIIa (BiosPacific, Emeryville, CA) react with the substrate (0.20 mM - 1 mM) in the presence of inhibitor. Reactions were allowed to go for 30 minutes and the velocities (rate of absorbance change vs time) were measured in the time frame of 25-30 minutes. The following relationship was used to calculate K_i values.

$$\frac{v_o - v_s}{v_s} = \frac{I}{K_i\ (1 + S/K_m)}$$

where:

v_o is the velocity of the control in the absence of inhibitor;

v_s is the velocity in the presence of inhibitor;

I is the concentration of inhibitor;

K_i is the dissociation constant of the enzyme: inhibitor complex;

S is the concentration of substrate;

K_m is the Michaelis constant.

Using the methodology described above, representative compounds of this invention were evaluated and found to exhibit a K_i of less 500 µM thereby confirming the utility of compounds of the invention as effective inhibitors of human blood coagulation proteases. The results of these assays are summarized in Table 62, where +++ indicates a K_i < 500 nM; ++ indicates a K_i < 50,000 nM; and + indicates a K_i 500,000 < nM; - indicates inactive.

Table 62. K_i values for inhibition of Serine Proteases by compounds of the present invention.

EXAMPLE	Thrombin	Factor Xa	Factor VIIa
1	+++	++	NT
2	+++	+++	+++
29	+++	NT	NT
35	+++	+++	++
68	++	++	+++
129	+++	+++	NT
199	+++	+++	+++
203	+++	+++	+++
224	+++	+++	+++
227	+++	+++	++
231	+++	+++	++
261	+++	+++	+++
262	+++	+++	+++
263	+++	+++	+++
283	+++	+++	++
286	+++	+++	+++
288	+++	NT	+++
298	+++	+++	+++
299	+++	+++	+++
302	+++	+++	++
303	+++	++	++
304	++	++	++
305	++	++	++
468	++	++	++
474	++	++	++
887	+++	NT	NT
888	+++	++	++
890	+++	++	++
892	+++	++	++
898	+++	++	++
905	++	++	-
913	+++	-	++

914	+++	++	++
917	+++	++	++
920	+++	NT	NT
921	+++	++	++
923	+++	++	++
931	+++	++	++
967	+++	++	+++
969	+++	++	++
977	+++	NT	NT
1352	+++	++	NT
1431	+++	NT	NT
1459	++	++	++
1467	+++	NT	++
1521	+++	NT	NT
1557	+++	NT	++
2066	NT	NT	NT
2067	+++	NT	NT
2068	++	++	++
2073	+++	++	++
2074	+++	++	++
2411	+++	NT	NT
2412	+++	++	++
2414	+++	++	++
2416	+++	++	++
2422	+++	++	++
2430	++	++	-
2439	+++	++	++
2440	+++	++	++
2443	+++	++	++
2446	+++	++	++
2447	+++	++	++
2490	+++	++	+++
2491	+++	+++	++
2499	+++	++	++
2533	+++	++	-

2752	+++	NT	NT
2780	+++	++	+++
2781	+++	++	++
2837	++	NT	NT
3349	+++	++	NT
3458	+++	-	++
3465	+++	++	++
3538	+++	++	++
4064	++	++	++
4065	++	++	++
5426	+++	+++	NT
5529	+++	+++	NT
5551	NT	NT	NT

The final concentration of thrombin was 4 NIH units/mL. The effectiveness of compounds in prolonging clotting times is reported as K_iTT (nM; level of inhibitor required to prolong clotting to the time observed for 2 NIH units/mL thrombin in the absence of inhibitor). Compounds of the present invention were found to have K_iTT values in the range of 100 - 6000 nm.

Generally, these compounds may be administered orally or parenterally to a host to obtain an anti-thrombogenic effect. The dosage of the active compound depends on the mammalian species, body weight, age, and mode of administration as will be obvious to one skilled in the art. In the case of large mammals such as humans, the compounds may be administered alone or in combination with pharmaceutical carriers or diluents at a dose of from 0.02 to 15 mg/Kg to obtain the anti-thrombogenic effect, and may be given as a single dose or in divided doses or as a sustained release formulation.

Pharmaceutical carriers or diluents are well known and include sugars, starches and water, which may be used to make tablets, capsules, injectable solutions or

the like which can serve as suitable dosage forms for administration of the compounds of this invention. Remington's Pharmaceutical Sciences, A. Osol, is a standard reference text which discloses suitable pharmaceutical carriers and dosage forms. The disclosure of this text is hereby incorporated by reference for a more complete teaching of suitable dosage forms for administration of the compounds of this invention.

WHAT IS CLAIMED IS:

1. A compound of formula:

$$R^1\text{-}Z\text{-}CHR^2\text{-}A$$
(I)

wherein:

A is

a) $-BY^1Y^2$,
b) $-C(=O)CF_3$,
c) $-C(=O)CHF_2$,
d) $-C(=O)CH_2F$,
e) $-C(=O)CH_2Cl$,
f) $-C(=O)OR^3$,
g) $-C(=O)NR^{15}R^{16}$,
h) $-C(=O)R^3$,
i) $-C(=O)COOR^3$,
j) $-C(=O)C(=O)NR^{15}R^{16}$,
k) $-C(=O)C(=O)R^3$,
l) $-C(=O)CY^3Y^4COOR^3$,
m) $-C(=O)CY^3Y^4C(=O)NR^{15}R^{16}$,
n) $-C(=O)CY^3Y^4C(=O)R^3$,
o) $-PO_3H_2$, or
p) $-CHO$;

Y^1 and Y^2 are independently

a) $-OH$,
b) $-F$,
c) $-NR^3R^4$, or
d) C_1-C_8 alkoxy;

Y^1 and Y^2 can be taken together to form:

e) a cyclic boron ester where said chain or ring contains from 2 to 20 carbon atoms and, from 0-3 heteroatoms which can be N, S, or O,
f) a cyclic boron amide where said chain or ring contains from 2 to 20 carbon atoms and, from 0-3 heteroatoms which can be N, S, or O,

g) a cyclic boron amide-ester where said chain or ring contains from 2 to 20 carbon atoms and from 0-3 heteroatoms which can be N, S, or O;

Y^3 and Y^4 are independently

a) -OH or

b) -F;

Z is

a) $-(CH_2)_mCONR^8-$,

b) $-(CH_2)_mCSNR^8-$,

c) $-(CH_2)_mSO_2NR^8-$,

d) $-(CH_2)_mCO_2-$,

e) $-(CH_2)_mC(S)O-$, or

f) $-(CH_2)_mSO_2O-$;

R^1 is

a) $-(CH_2)_p$-aryl, wherein aryl is phenyl, naphthyl or biphenyl substituted with one, two or three substituents selected from the group consisting of:

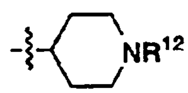
halo (F, Cl, Br, I), methylenedioxy, $-R^8$, $-NR^8COR^9$, C_2-C_6-alkenyl, C_2-C_6-alkynyl, $-(CH_2)_w-OR^8$, $-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wCN$, $-(CH_2)_wNC$, $-(CH_2)_wNO_2$, $-(CH_2)_wCF_3$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wNR^8R^9$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCHO$; $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$. $-(CH_2)_wSO_2NH-(C_1-C_5)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH-CO-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH-CO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wNHSO_2$-phenyl, $-(CH_2)_wNHSO_2$-perfluorophenyl, $-(CH_2)_wCN_4H$, $-O(CH_2)_wCN$, $-NH(CH_2)_wCN$, $-S(CH_2)_wCN$, $-(CH_2)_wNH-CO-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-perfluoroalkyl), $-(CH_2)_wNH-CO-$(phenyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-perfluoroalkyl), $-(CH_2)_wNH-CO_2-$(phenyl), $-O(C{=}O)-(C_1-C_5$-alkyl),

;

b) heteroaryl, wherein heteroaryl is an unsubstituted, monosubstituted or disubstituted:

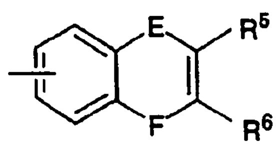
i) quinolinyl,
ii) isoquinolinyl,
iii) benzopyranyl,
iv) benzothiophenyl,
v) benzofuranyl,
vi) 5,6,7,8-tetrahydroquinolinyl,
vii) 5,6,7,8-tetrahydroisoquinolinyl,

and wherein the substituents are members selected from the group consisting of halo (F, Cl, Br, I), -CN, C_1-C_{10}-alkyl, C_3-C_8-cycloalkyl, C_2-C_{10}-alkenyl, C_2-C_{10}-alkynyl, R^8, $-OR^8$, $-NO_2$, $-CF_3$, $-S(O)_rR^7$, $-NR^8R^9$, $-COR^8$, $-CO_2R^8$, $-CONHR^8$, NR^8COR^9, $NR^8CO_2R^9$,



;

c)



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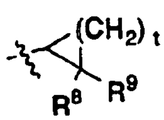
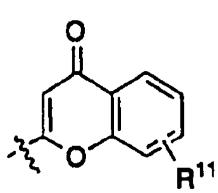
d)



;

e)



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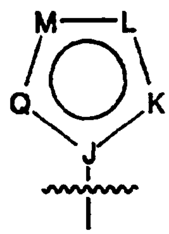
f)



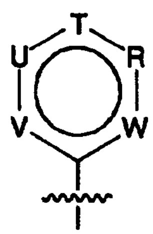
wherein J is N or C and K, L, M and Q are independently selected at each occurrence from the group consisting of N, CR^{13}, S or O, provided that:

i) there may be only one S or O present in the ring at a time;

ii) there may only be 1-2 N present when there is an O or S present;

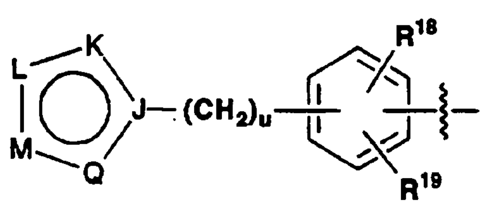
iii) there may be only 1-4 N present;

g)

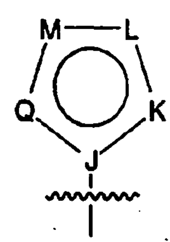


wherein W, R, T, U and V are selected from the group consisting of: CR^{13} or N, provided that there be no less than 1 and no more than 3 N present;

h)

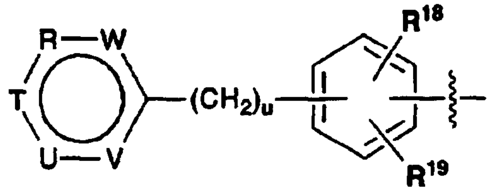
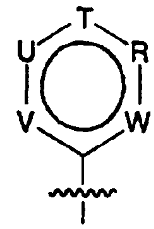


wherein



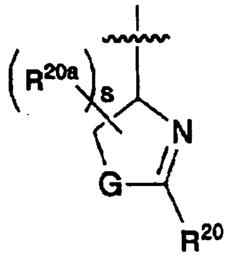
is as defined above;

i)

 wherein 

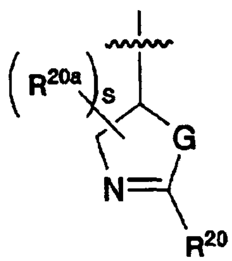
is as defined above;

j)



wherein G is O, S, or NP, where P is an amine protecting group selected from the group consisting of: $-R^3$, $-C(=O)R^3$, $-SO_2R^3$, $-C(=O)OR^3$);

k)



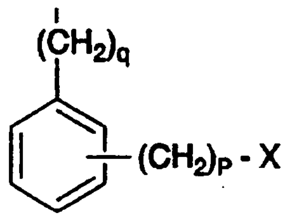
wherein G is O, S, or NP, where P is an amine protecting group selected from the group consisting of: $-R^3$, $-C(=O)R^3$, $-SO_2R^3$, $-C(=O)OR^3$);

R^2 is

a) -(C1-C12 alkyl)-X,

b) -(C2-C12 alkenyl)-X, or

c)



;

X is

a) halogen (F, Cl, Br, I),
b) -CN,
c) $-NO_2$,
d) $-CF_3$,
e) $-S(O)_rR^{14}$,
f) $-NHR^{14}$
g) $-NHS(O)_rR^{14}$,
h) -NHC(NH)H,
i) -NHC(NH)NHOH,
j) -NHC(NH)NHCN,
k) $-NHC(NH)NHR^{14}$,
l) $-NHC(NH)NHCOR^{14}$,
m) $-C(NH)NHR^{14}$,
n) $-C(NH)NHCOR^{14}$,
o) $-C(O)NHR^{14}$,
p) $-C(O)NHC(O)R^{14}$,
q) $-C(O)OR^{14}$,
r) $-OR^{14}$,
s) $-OC(O)R^{14}$,
t) $-OC(O)OR^{14}$,
u) $-OC(O)NHR^{14}$,
v) $-OC(O)NHC(O)R^{14}$,
w) $-SC(=NH)NHR^{14}$, or
x) $-SC(=NH)NHC(=O)R^{14}$;

R^3 is

a) hydrogen,
b) C_1-C_8 alkyl,
c) -(C_1-C_4 alkyl)-aryl,
d) C_5-C_7 cycloalkyl, or

e) phenyl;

R^4 is

a) hydrogen,

b) C_1-C_8 alkyl,

c) -(C_1-C_4 alkyl)-aryl,

d) C_5-C_7 cycloalkyl,

e) phenyl, or

f) phenylsulfonyl;

R^5 and R^6 are hydrogen or when taken together form a six membered aromatic ring optionally substituted with one, two or three substituents selected from the group consisting of halo (F, Cl, Br, I), -CN, C_1-C_{10}-alkyl, C_3-C_8-cycloalkyl, C_2-C_{10}-alkenyl, C_2-C_{10}-alkynyl, -OR^8, -NO_2, -CF_3, -$S(O)_rR^7$, -NR^8R^9, -COR^8, -CO_2R^8, -$CONR^8R^9$, phenyl, benzyl, phenylethyl;

R^7 is

a) phenyl,

b) C_1-C_8-alkyl,

c) C_1-C_4-alkoxy,

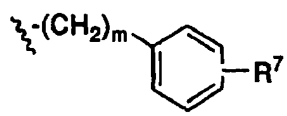
d) -CF_3, or

e) benzyl;

R^8 and R^9 are independently

a) H,

b)



,

c) C_3-C_7 cycloalkyl,

d) C_1-C_8-alkyl, or

R^{11} is

a) halo (F, Cl, Br, I),

b) -CN,

c) C_1-C_{10}-alkyl,

d) C_3-C_8-cycloalkyl,

e) C_2-C_{10}-alkenyl,

f) C_2-C_{10}-alkynyl,
g) -OR^8,
h) -NO_2,
i) -CF_3,
j) -$S(O)_rR^7$,
k) -NR^8R^9,
m) -CO_2R^8,
l) -COR^9,
n) -$CONR^8R^9$, or
o) H

R^{12} is

H, C_1-C_4 alkyl, phenyl, benzyl, -COR^7, or -$S(O)_rR^7$;

R^{13} is

H, halogen (F, Cl, Br, I), (C_1-C_8)alkyl, (C_1-C_6)-perfluoroalkyl, -$(CH_2)_r$-D, C_3-C_8 cycloalkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, methylenedioxy, -$(CH_2)_w$-OR^8, -$(CH_2)_wNC$, -$(CH_2)_wCN$, -$(CH_2)_wNO_2$, -$(CH_2)_wCF_3$, -$(CH_2)_wS(O)_rR^7$, -$(CH_2)_wNR^8R^9$, -$(CH_2)_wCOR^8$, -$(CH_2)_wCO_2R^8$, -$(CH_2)_wCONR^8R^9$, -$(CH_2)_wSO_2NH$-(C_1-C_6)-alkyl, -$(CH_2)_wSO_2NH_2$, -$(CH_2)_wSO_2NH$-CO-(C_1-C_6)-alkyl, -$(CH_2)_wSO_2NH$-CO_2-(C_1-C_6)-alkyl, -$(CH_2)_wSO_2NH$, -$(CH_2)_wNHSO_2$-(C_1-C_6)-alkyl, -$(CH_2)_wNHSO_2$-(C_1-C_6)-perfluoroalkyl, -$(CH_2)_wNHSO_2$-phenyl, -$(CH_2)_wNHSO_2$-perfluorophenyl, -$(CH_2)_wCN_4H$, -O(C=O)-(C_1-C_5-alkyl), -$O(CH_2)_wCN$, -$NH(CH_2)_wCN$, -$S(CH_2)_wCN$, -$(CH_2)_wNH$-CO-(C_1-C_6-alkyl), -$(CH_2)_wNH$-CO-(C_1-C_6-perfluoroalkyl), -$(CH_2)_wNH$-CO-(phenyl), -$(CH_2)_wNH$-CO_2-(C_1-C_6-alkyl), -$(CH_2)_wNH$-CO_2-(C_1-C_6-perfluoroalkyl), -$(CH_2)_wNH$-CO_2-(phenyl), -$(CH_2)_u$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18}, -S-$(CH_2)_u$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18}, or -O-$(CH_2)_u$phenyl wherein

the phenyl contains 0-3 substituents selected from R^{18};

R^{14} is

a) -H,

b) $-CF_3$

c) $-C_1-C_4$ alkyl,

d) $-(CH_2)_q$-aryl, wherein aryl is phenyl, biphenyl, naphthyl, or fluorenyl unsubstituted or substituted with one to three substituents selected from the group consisting of:

halogen (F, Cl, Br, I),

$-CF_3$,

$-(C_1-C_4$ alkyl),

$-(CH_2)_xR^{15}$,

$-(CH_2)_xCO(CH_2)_yR^{15}$,

$-(CH_2)_xC(O)O(CH_2)_yR^{15}$,

$-(CH_2)_xC(O)N[(CH_2)_yR^{15}][(CH_2)_yR^{16}]$,

-methylenedioxy,

-(C1-C4 alkoxy),

$-(CH_2)_xO(CH_2)_yR^{15}$,

$-(CH_2)_xOCO(CH_2)_yR^{15}$,

$-(CH_2)_xOC(O)O(CH_2)_yR^{15}$,

$-(CH_2)_xOC(O)N[(CH_2)_yR^{15}][(CH_2)_yR^{16}]$,

$-(CH_2)_xOC(O)N[(CH_2)_yR^{15}][CO(CH_2)_yR^{16}]$,

$-(CH_2)_xS(O)_r(CH_2)_yR^{15}$,

$-(CH_2)_xS(O)_r(CH_2)_yCOR^{15}$,

$-(CH_2)_xS(O)_r(CH_2)_yC(O)OR^{15}$,

$-(CH_2)_xS(O)_rN[(CH_2)_yR^{15}][(CH_2)_yR^{16}]$

$-(CH_2)_xN[(CH_2)_yR^{15}][(CH_2)_yR^{16}]$,

$-(CH_2)_xN[(CH_2)_yR^{15}][CO(CH_2)_yR^{16}]$,

$-(CH_2)_xN[(CH_2)_yR^{15}][C(O)O(CH_2)_yR^{16}]$,

$-(CH_2)_xN[(CH_2)_yR^{15}]CON[(CH_2)_yR^{15}][(CH_2)_yR^{16}]$,

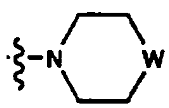
$-(CH_2)_xN[(CH_2)_yR^{15}]CON[(CH_2)_yR^{15}]-[CO(CH_2)_yR^{16}]$,

$-(CH_2)_xN[(CH_2)_yR^{15}][S(O)_r(CH_2)_yR^{16}]$;

R^{15} and R^{16} are independently

a) hydrogen,
b) C_1-C_8 alkyl,
c) -(C_1-C_4 alkyl)-aryl, where aryl is defined above,
d) C_5-C_7 cycloalkyl,
e) phenyl, substituted by 0-3 R^{18},
f) benzyl, substituted by 0-3 R^{18}, or
g) -(C_1-C_4 alkoxy);

R^{15} and R^{16} can be taken together to form a ring:


;

R^{18} and R^{19} are independently
H, halo (F, Cl, Br, I), C_1-C_8-alkyl, C_3-C_8 cycloalkyl, C_2-C_6-alkenyl, C_2-C_6-alkynyl, -$(CH_2)_w$-OR^8, -$(CH_2)_wCN$, -$(CH_2)_wNC$, -$(CH_2)_wNO_2$, -$(CH_2)_wCF_3$, -$(CH_2)_wS(O)_rR^7$, -$(CH_2)_wNR^8R^9$, -$(CH_2)_wCOR^8$, -$(CH_2)_wCO_2R^8$, -$(CH_2)_wCONR^8R^9$, -$(CH_2)_wSO_2NH$-(C_1-C_6)-alkyl, -$(CH_2)_wSO_2NH_2$, -$(CH_2)_wSO_2NH$-CO-(C_1-C_6)-alkyl, -$(CH_2)_wSO_2NH$-CO_2-(C_1-C_6)-alkyl, -$(CH_2)_wSO_2NH$-$(CH_2)_wNHSO_2$-(C_1-C_6)-alkyl, -$(CH_2)_wNHSO_2$-(C_1-C_6)-perfluoroalkyl, -$(CH_2)_wNHSO_2$-phenyl, -$(CH_2)_wNHSO_2$-perfluorophenyl, -$(CH_2)_wCN_4H$, -O(C=O)-(C_1-C_5-alkyl), -$O(CH_2)_wCN$, -$NH(CH_2)_wCN$, -$S(CH_2)_wCN$, -$(CH_2)_wNH$-CO-(C_1-C_6-alkyl), -$(CH_2)_wNH$-CO-(C_1-C_6-perfluoroalkyl), -$(CH_2)_wNH$-CO-(C_1-C_6-phenyl), -$(CH_2)_wNH$-CO_2-(C_1-C_6-alkyl), -$(CH_2)_wNH$-CO_2-(C_1-C_6-phenyl), or -O(C=O)phenyl;

R18 and R19 can be taken together to form a methylenedioxy group;

R^{20} and R^{20a} are independently:
(C_1-C_8)alkyl, -$(CH_2)_u$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18}, (C_1-C_6)-perfluoroalkyl,or -$(CH_2)_r$-D;

m is 0 to 6;
n is 1 to 2;
p is 0 to 2;
q is 0 to 4.
r is 0 to 2;
s is 0 to 3;
t is 1 to 5;
u is 0 to 5;
v is 0 to 5;
w is 0 to 5;
x is 0 to 6;
y is 0 to 6;
D is fur-2-yl, fur-3-yl, thiophen-2-yl, thiophen-3-yl, oxazol-2-yl, oxazol-4-yl, thiazol-2-yl, thiazol-4-yl, isoxazol-3-yl, isoxazol-4-yl, isoxazol-5-yl, pyrid-2-yl, pyrid-4-yl, pyridazin-3-yl, pyridazin-4-yl, pyrimidin-2-yl, pyrimidin-4-yl, pyrazin-2-yl, or tetrazolyl;
E is -CO-, $-SO_2-$, $-CH_2-$ or a single bond,
F is -CO-;
W is
a) -O-,
b) $-S(O)_r-$,
c) $-NR^4-$,
d) $-NC(=O)R^3-$,
e) a bond, or
f) $-(CH_2)_n-$;
or prodrugs or pharmaceutically acceptable salts thereof.

2. A compound of Claim 1 wherein:
Z is
a) $-(CH_2)_mCONR^8-$,
b) $-(CH_2)_mCSNR^8-$,
c) $-(CH_2)_mSO_2NR^8-$,
R^1 is

a) $-(CH_2)_p$-aryl, wherein aryl is phenyl, naphthyl or biphenyl substituted with one, two or three substituents selected from the group consisting of:

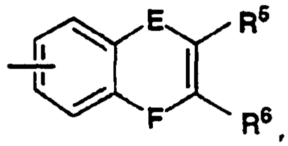
halo (F, Cl, Br, I), methylenedioxy, $-R^8$, $-NR^8COR^9$, C_2-C_6-alkenyl, C_2-C_6-alkynyl, $-(CH_2)_w-OR^8$, $-(C_1$-$C_6)$-perfluoroalkyl, $-(CH_2)_wCN$, $-(CH_2)_wNC$, $-(CH_2)_wNO_2$, $-(CH_2)_wCF_3$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wNR^8R^9$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$. $-(CH_2)_wSO_2NH-(C_1$-$C_6)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH-CO-(C_1$-$C_6)$-alkyl, $-(CH_2)_wSO_2NH-CO_2-(C_1$-$C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1$-$C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1$-$C_6)$-perfluoroalkyl, $-(CH_2)_wNHSO_2$-phenyl, $-(CH_2)_wNHSO_2$-perfluorophenyl, $-(CH_2)_wCN_4H$, $-O(CH_2)_wCN$, $-NH(CH_2)_wCN$, $-S(CH_2)_wCN$, $-(CH_2)_wNH-CO-(C_1$-C_6-alkyl), $-(CH_2)_wNH-CO-(C_1$-C_6-perfluoroalkyl), $-(CH_2)_wNH-CO-$(phenyl), $-(CH_2)_wNH-CO_2-(C_1$-C_6-alkyl), $-(CH_2)_wNH-CO_2-(C_1$-C_6-perfluoroalkyl), or $-(CH_2)_wNH-CO_2-$(phenyl), -O(C=O-(C_1-C_5 alkyl);

b) heteroaryl, wherein heteroaryl is an unsubstituted, monosubstituted or disubstituted:

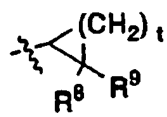
i) quinolinyl,
ii) isoquinolinyl,
iii) benzopyranyl,
iv) benzothiophenyl,
v) benzofuranyl,
vi) 5,6,7,8-tetrahydroquinolinyl,
vii) 5,6,7,8-tetrahydroisoquinolinyl,

and wherein the substituents are selected from the group consisting of halo (F, Cl, Br, I), -CN, C_1-C_{10}-alkyl, C_3-C_8-cycloalkyl, C_2-C_{10}-alkenyl, C_2-C_{10}-alkynyl, R^8, $-OR^8$, $-NO_2$, $-CF_3$, $-S(O)_rR^7$, $-NR^8R^9$, $-COR^8$, $-CO_2R^8$, $-CONR^8H$, NR^8COR^9, $NR^8CO_2R^9$;

c)

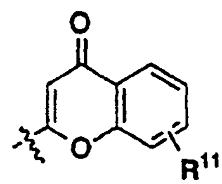


d)



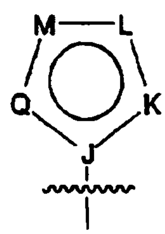
;

e)



;

f) wherein the ring

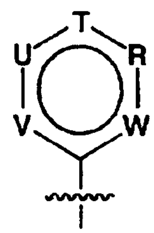


represented by -J-K-L-M-Q- is a group selected from:

1) $-N-C(R^{13})=C(R^{13})-C(R^{13})=C(R^{13})-$,
2) $-N-C(R^{13})=C(R^{13})-C(R^{13})=N-$,
3) $-N-C(R^{13})=C(R^{13})-N=C(R^{13})-$,
4) $-N-C(R^{13})=N-C(R^{13})=N-$,
5) $-N-C(R^{13})=C(R^{13})-N=N-$
6) $-N-C(R^{13})=N-N=N-$,
7) $-N-N=C(R^{13})-N=N-$,
8) $=C-O-C(R^{13})=N-C(R^{13})=$,
9) $-C=C(R^{13})-O-C(R^{13})=N-$,
10) $=C-O-C(R^{13})=C(R^{13})-N=$,
11) $-C=C(R^{13})-C(R^{13})=N-O-$,
12) $=C-C(R^{13})=C(R^{13})-O-N=$,
13) $-C=C(R^{13})-O-N=C(R^{13})-$,
14) $=C-S-C(R^{13})=N-C(R^{13})=$,

15) $-C{=}C(R^{13})-S-C(R^{13}){=}N-$,
16) $=C-S-C(R^{13}){=}C(R^{13})-N=$,
17) $-C{=}N-S-N{=}C(R^{13})-$,
18) $-C{=}N-S-C(R^{13}){=}N-$,
19) $=C-S-N{=}C(R^{13})-N=$,
20) $=C-S-C(R^{13}){=}C(R^{13})-C(R^{13})=$,
21) $-C{=}C(R^{13})-S-C(R^{13}){=}C(R^{13})-$,
22) $=C-O-C(R^{13}){=}C(R^{13})-C(R^{13})=$, or
23) $-C{=}C(R^{13})-O-C(R^{13}){=}C(R^{13})-$;

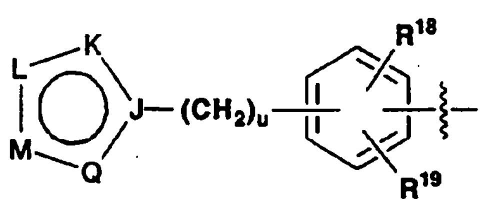
g) wherein the ring



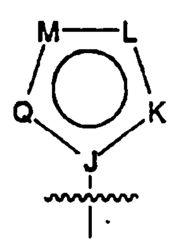
represented by -C-W-R-T-U-V- is a group selected from:

1) $-C{=}N-C(R^{13}){=}C(R^{13})-C(R^{13}){=}C(R^{13})-$,
2) $-C{=}C(R^{13})-N{=}C(R^{13})-C(R^{13}){=}C(R^{13})-$,
3) $-C{=}C(R^{13})-C(R^{13}){=}N-C(R^{13}){=}C(R^{13})-$,
4) $-C{=}N-N{=}C(R^{13})-C(R^{13}){=}C(R^{13})-$,
5) $-C{=}C(R^{13})-N{=}N-C(R^{13}){=}C(R^{13})-$,
6) $-C{=}N-C(R^{13}){=}C(R^{13})-C(R^{13}){=}N-$,
7) $-C{=}N-C(R^{13}){=}C(R^{13})-N{=}C(R^{13})-$,
8) $-C{=}N-C(R^{13}){=}N-C(R^{13}){=}C(R^{13})-$,
9) $-C{=}C(R^{13})-N{=}C(R^{13})-N{=}C(R^{13})-$,
10) $-C{=}N-C(R^{13}){=}N-N{=}C(R^{13})-$,
11) $-C{=}N-C(R^{13}){=}C(R^{13})-N{=}N-$, or
12) $-C{=}C(R^{13})-N{=}C(R^{13})-N{=}N-$;

h)

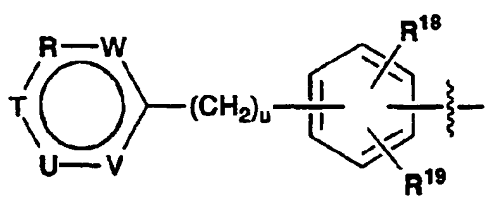


wherein

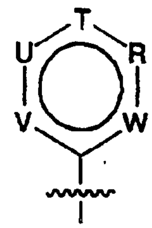


is as defined above;

i)

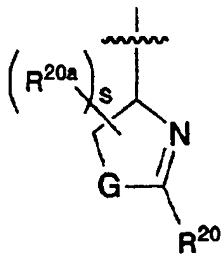


wherein



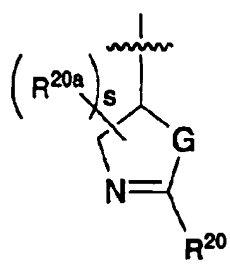
is as defined above;

j)



wherein G is O, S, or NP (where P is an amine protecting group selected from the group consisting of: $-R^3$, $-C(=O)R^3$, $-SO_2R^3$, $-C(=O)OR^3$;

k)



wherein G is O, S, or NP (where P is an amine protecting group selected from the group consisting of: $-R^3$, $-C(=O)R^3$, $-SO_2R^3$, $-C(=O)OR^3$;

R^{14} is :

a) -H,

b) $-CF_3$

c) $-C_1-C_4$ alkyl,

d) $-(CH_2)_q$-aryl, wherein aryl is phenyl, biphenyl, naphthyl, or fluorenyl unsubstituted or substituted

with one to three substituents selected from the group consisting of:

halogen (F, Cl, Br, I),

$-CF_3$,

$-(C_1-C_4$ alkyl),

-methylenedioxy,

$-(C_1-C_4$ alkoxy),

$-(CH_2)_xN[(CH_2)_yR^{15}][(CH_2)_yR^{16}]$;

and all other required substituents of formula (I) are as defined in Claim 1.

3. A compound of Claim 2 wherein

A is

a) $-BY^1Y^2$,

b) $-C(=O)CF_3$,

c) $-C(=O)CHF_2$,

d) $-C(=O)CH_2F$,

e) $-C(=O)CH_2Cl$,

f) $-C(=O)OR^3$,

g) $-C(=O)NR^{15}R^{16}$,

h) $-C(=O)R^3$,

i) $-C(=O)COOR^3$,

j) $-C(=O)C(=O)NR^{15}R^{16}$,

k) $-C(=O)C(=O)R^3$,

l) -CHO;

Y^1 and Y^2 are independently

a) -OH, or

b) C_1-C_8 alkoxy;

Y^1 and Y^2 can be taken together to form

a cyclic boron ester where said chain or ring contains from 2 to 20 carbon atoms and from 0-3 heteroatoms which can be N, S, or O,

Z is

a) $-(CH_2)_mCONR^8-$,

b) $-(CH_2)_mCSNR^8-$, or

c) $-(CH_2)_mSO_2NR^8-$;

R^1 is

a) $-(CH_2)_p$-aryl, wherein aryl is phenyl, naphthyl or biphenyl substituted with one, two or three substituents independently selected at each occurrence from the group consisting of:

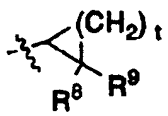
halo (F, Cl, Br, I), methylenedioxy, $-R^8$, $-NR^8COR^9$, C_2-C_6-alkenyl, C_2-C_6-alkynyl, $-(CH_2)_w$-OR^8, $-(C_1$-$C_6)$-perfluoroalkyl, $-(CH_2)_wCN$, $-(CH_2)_wNC$, $-(CH_2)_wNO_2$, $-(CH_2)_wCF_3$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wNR^8R^9$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$. $-(CH_2)_wSO_2NH$-$(C_1$-$C_6)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH$-CO-$(C_1$-$C_6)$-alkyl, $-(CH_2)_wSO_2NH$-CO_2-$(C_1$-$C_6)$-alkyl, $-(CH_2)_wSO_2NH$-, $-(CH_2)_wNHSO_2$-$(C_1$-$C_6)$-alkyl, $-(CH_2)_wNHSO_2$-$(C_1$-$C_6)$-perfluoroalkyl, $-(CH_2)_wNHSO_2$-phenyl, $-(CH_2)_wNHSO_2$-perfluorophenyl, $-(CH_2)_wCN_4H$, $-O(CH_2)_wCN$, $-NH(CH_2)_wCN$, $-S(CH_2)_wCN$, $-(CH_2)_wNH$-CO-$(C_1$-C_6-alkyl), $-(CH_2)_wNH$-CO-$(C_1$-C_6-perfluoroalkyl), $-(CH_2)_wNH$-CO-(phenyl), $-(CH_2)_wNH$-CO_2-$(C_1$-C_6-alkyl), $-(CH_2)_wNH$-CO_2-$(C_1$-C_6-perfluoroalkyl), or $-(CH_2)_wNH$-CO_2-(phenyl), $-O(C{=}O)$-C_1-C_5-alkyl);

b) heteroaryl, wherein heteroaryl is an unsubstituted, monosubstituted or disubstituted:

i) quinolinyl,
ii) isoquinolinyl,
iii) benzopyranyl,
iv) benzothiophenyl,
v) benzofuranyl,
vi) 5,6,7,8-tetrahydroquinolinyl,
vii) 5,6,7,8-tetrahydroisoquinolinyl,

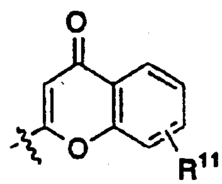
wherein the substituents are members selected from the group consisting of: halo (F, Cl, Br, I), -CN, C_1-C_{10}-alkyl, C_3-C_8-cycloalkyl, C_2-C_{10}-alkenyl, C_2-C_{10}-alkynyl, R^8, -OR^8, -NO_2, -CF_3, -$S(O)_rR^7$, -NR^8R^9, -COR^8, -CO_2R^8, -$CONR^8H$, NR^8COR^9, $NR^8CO_2R^9$;

c)



;

d)



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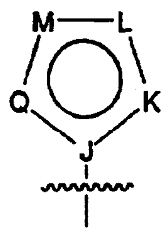
e)



wherein the ring represented by -J-K-L-M-Q- is a group selected from:

1) -N-C(R^{13})=C(R^{13})-C(R^{13})=C(R^{13})-,
2) -N-C(R^{13})=C(R^{13})-C(R^{13})=N-,
3) -N-C(R^{13})=C(R^{13})-N=C(R^{13})-,
4) -N-C(R^{13})=N-C(R^{13})=N-,
5) -N-C(R^{13})=C(R^{13})-N=N-
6) -N-C(R^{13})=N-N=N-,
7) -N-N=C(R^{13})-N=N-,
8) =C-O-C(R^{13})=N-C(R^{13})=,
9) -C=C(R^{13})-O-C(R^{13})=N-,
10) =C-O-C(R^{13})=C(R^{13})-N=,
11) -C=C(R^{13})-C(R^{13})=N-O-,

12) =C-C(R^{13})=C(R^{13})-O-N=,

13) -C=C(R^{13})-O-N=C(R^{13})-,

14) =C-S-C(R^{13})=N-C(R^{13})=,

15) -C=C(R^{13})-S-C(R^{13})=N-,

16) =C-S-C(R^{13})=C(R^{13})-N=,

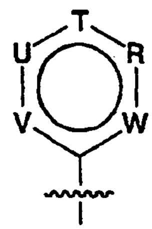
17) =C-S-C(R^{13})=C(R^{13})-C(R^{13})=,

18) -C=C(R^{13})-S-C(R^{13})=C(R^{13})-,

19) =C-O-C(R^{13})=C(R^{13})-C(R^{13})=, or

20) -C=C(R^{13})-O-C(R^{13})=C(R^{13})-;

f)



wherein the ring represented by -C-W-R-T-U-V- is a group selected from:

1) -C=N-C(R^{13})=C(R^{13})-C(R^{13})=C(R^{13})-,

2) -C=C(R^{13})-N=C(R^{13})-C(R^{13})=C(R^{13})-,

3) -C=C(R^{13})-C(R^{13})=N-C(R^{13})=C(R^{13})-,

4) -C=N-N=C(R^{13})-C(R^{13})=C(R^{13})-,

5) -C=C(R^{13})-N=N-C(R^{13})=C(R^{13})-,

6) -C=N-C(R^{13})=C(R^{13})-C(R^{13})=N-,

7) -C=N-C(R^{13})=C(R^{13})-N=C(R^{13})-,

8) -C=N-C(R^{13})=N-C(R^{13})=C(R^{13})-,

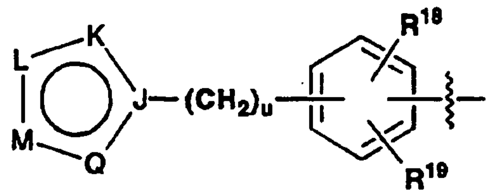
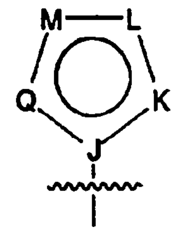
9) -C=C(R^{13})-N=C(R^{13})-N=C(R^{13})-,

10) -C=N-C(R^{13})=N-N=C(R^{13})-,

11) -C=N-C(R^{13})=C(R^{13})-N=N-, or

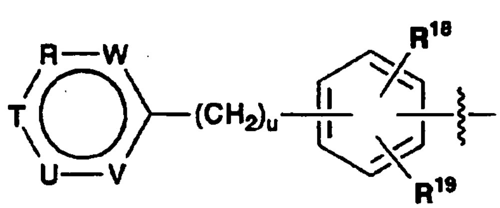
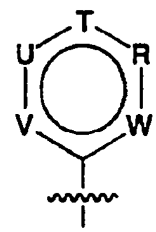
12) -C=C(R^{13})-N=C(R^{13})-N=N-;

g)

 wherein 

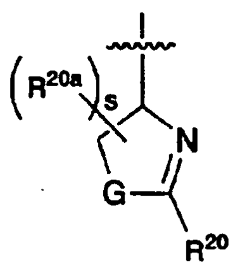
is as defined above;

h)

 wherein 

is as defined above; or

i)



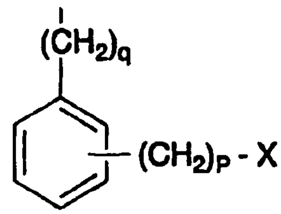
wherein G is O, S, or NP (where P is an amine protecting group selected from the group consisting of: $-R^3$, $-C(=O)R^3$, $-SO_2R^3$, $-C(=O)OR^3$);

R^2 is

a) -(C1-C12 alkyl)-X,

b) -(C_2-C_{12} alkenyl)-X, or

c)



;

X is

a) halogen (F, Cl, Br, I),
b) -CN,
c) $-NO_2$,
d) $-CF_3$,
e) $-NHR^{14}$
f) $-NHS(O)_rR^{14}$,
g) -NHC(NH)H,
h) -NHC(NH)NHOH,
i) -NHC(NH)NHCN,
j) $-NHC(NH)NHR^{14}$,
k) $-NHC(NH)NHCOR^{14}$,
l) $-C(NH)NHR^{14}$,
m) $-C(NH)NHCOR^{14}$,
n) $-C(O)NHR^{14}$,
o) $-C(O)NHC(O)R^{14}$,
p) $-C(O)OR^{14}$,
q) $-OR^{14}$,
r) $-OC(O)R^{14}$,
s) $-OC(O)OR^{14}$,
t) $-OC(O)NHR^{14}$,
u) $-OC(O)NHC(O)R^{14}$,
v) $-SC(=NH)NHR^{14}$, or
w) $-SC(=NH)NHC(=O)R^{14}$;

R^{13} is

H, halogen (F, Cl, Br, I), (C_1-C_6)alkyl, $-(CH_2)_r-D$, methylenedioxy, $-(CH_2)_w-OR^8$, $-(CH_2)_wNC$, $-(CH_2)_wCN$, $-(CH_2)_wNO_2$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wNR^8R^9$, $-(CH_2)_wCOR^8$,

$-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$, $-(CH_2)_wSO_2NH-(C_1-C_5)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH-CO-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH-CO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wNHSO_2$-phenyl, $-(CH_2)_wNHSO_2$-perfluorophenyl, $-(CH_2)_wCN_4H$, $-O(C{=}O)-(C_1-C_5$-alkyl), $-O(CH_2)_wCN$, $-NH(CH_2)_wCN$, $-S(CH_2)_wCN$, $-(CH_2)_wNH-CO-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-perfluoroalkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-phenyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-phenyl), $-(CH_2)_u$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18}, or $-O(C{=}O)$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18};

R^{14} is

a) -H,

b) $-CF_3$

c) -C1-C4 alkyl,

d) $-(CH_2)_q$-aryl, wherein aryl is phenyl, biphenyl, naphthyl, or fluorenyl unsubstituted or substituted with one to three substituents selected from the group consisting of:

halogen (F, Cl, Br, I),

$-CF_3$,

-(C1-C4 alkyl),

-methylenedioxy,

-(C1-C4 alkoxy), or

$-(CH_2)_xN[(CH_2)_yR^{15}][(CH_2)_yR^{16}]$;

R^{18} and R^{19} are independently H, halo (F, Cl, Br, I), C_1-C_6-alkyl, $-(CH_2)_w-OR^8$, $-(CH_2)_wCN$, $-(CH_2)_wNC$, $-(CH_2)_wNO_2$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wNR^8R^9$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$, $-(CH_2)_wSO_2NH-(C_1-$

C_5)-alkyl, -(CH_2)$_w$$SO_2NH_2$, -($CH_2$)$_w$$SO_2$NH-CO-($C_1$-$C_6$)-alkyl, -($CH_2$)$_w$$SO_2$NH-$CO_2$-($C_1$-$C_6$)-alkyl, -($CH_2$)$_wNHSO_2$-($C_1$-$C_6$)-alkyl, -($CH_2$)$_wNHSO_2$-($C_1$-$C_6$)-perfluoroalkyl, -($CH_2$)$_wNHSO_2$-phenyl, -($CH_2$)$_wNHSO_2$-perfluorophenyl, -($CH_2$)$_w$$CN_4$H, -O(C=O)-($C_1$-$C_5$-alkyl), -O($CH_2$)$_w$CN, -NH($CH_2$)$_w$CN, -S($CH_2$)$_w$CN, -($CH_2$)$_w$NH-CO-($C_1$-$C_6$-alkyl), -($CH_2$)$_w$NH-CO-($C_1$-$C_6$-perfluoroalkyl), -($CH_2$)$_w$NH-CO-($C_1$-$C_6$-phenyl), -($CH_2$)$_w$NH-$CO_2$-($C_1$-$C_6$-alkyl), -($CH_2$)$_w$NH-$CO_2$-($C_1$-$C_6$-phenyl), or -O(C=O)phenyl;

R18 and R19 can be taken together to form a methylenedioxy group;

R^{20} and R^{20a} are independently
(C_1-C_8)alkyl, -(CH_2)$_u$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18}, (C_1-C_6)-perfluoroalkyl,or -(CH_2)$_r$-D;

D is fur-2-yl, fur-3-yl, thiophen-2-yl, thiophen-3-yl, oxazol-2-yl, oxazol-4-yl, thiazol-2-yl, thiazol-4-yl, pyrid-2-yl, pyrid-4-yl, pyrimidin-2-yl, or pyrimidin-4-yl;

W is
a) -O-,
b) -NR^4-,
c) a bond, or
d) -(CH_2)$_n$-;

and all other required substituents of formula (I) are as in claim 2.

4. A compound of Claim 3 wherein:
A is -BY^1Y^2;
Y^1 and Y^2 are -OH;
Y^1 and Y^2 can be taken together to form a cyclic boron ester where said chain or ring contains from 2 to 20 carbon atoms and, from 0-3 heteroatoms which can be N, S, or O,

Z is $-(CH_2)_mCONR^8-$;

R^1 is

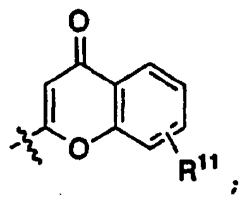
a) $-(CH_2)_p$-aryl, wherein aryl is phenyl, naphthyl or biphenyl substituted with one, two or three substituents selected from the group consisting of:

halo (F, Cl, Br, I), methylenedioxy, $-R^8$, $-NR^8COR^9$, C_2-C_6-alkenyl, C_2-C_6-alkynyl, $-(CH_2)_w-OR^8$, $-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wCN$, $-(CH_2)_wNC$, $-(CH_2)_wNO_2$, $-(CH_2)_wCF_3$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wNR^8R^9$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$. $-(CH_2)_wSO_2NH-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH-CO-(C_1-C_6)$-alkyl, $-(CH_2)_wSO_2NH-CO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-alkyl, $-(CH_2)_wNHSO_2-(C_1-C_6)$-perfluoroalkyl, $-(CH_2)_wNHSO_2$-phenyl, $-(CH_2)_wNHSO_2$-perfluorophenyl, $-(CH_2)_wCN_4H$, $-O(CH_2)_wCN$, $-NH(CH_2)_wCN$, $-S(CH_2)_wCN$, $-(CH_2)_wNH-CO-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-perfluoroalkyl), $-(CH_2)_wNH-CO-(C_1-C_6$-phenyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-alkyl), $-(CH_2)_wNH-CO_2-(C_1-C_6$-perfluoroalkyl), or $-(CH_2)_wNH-CO_2-(C_1-C_6$-phenyl);

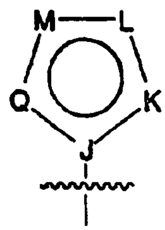
b) heteroaryl, wherein heteroaryl is an unsubstituted, monosubstituted or disubstituted isoquinolinyl wherein the substituents are members selected from the group consisting of:

halo (F, Cl, Br, I), -CN, C_1-C_{10}-alkyl, C_3-C_8-cycloalkyl, C_2-C_{10}-alkenyl, C_2-C_{10}-alkynyl, R^8, $-OR^8$, $-NO_2$, $-CF_3$, $-S(O)_rR^7$, $-NR^8R^9$, $-COR^8$, $-CO_2R^8$, $-CONR^8R^9$, NR^8COR^9, $NR^8CO_2R^9$,

c)



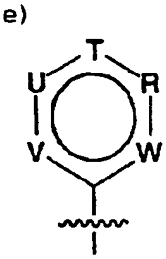
d)



wherein the ring represented by -J-K-L-M-Q- is a group selected from:

1) -N-C(R^{13})=N-C(R^{13})=N-,
2) -N-C(R^{13})=C(R^{13})-N=N-,
3) -N-N=C(R^{13})-N=N-,
5) -N-C(R^{13})=N-N=N-,
6) =C-S-C(R^{13})=C(R^{13})-C(R^{13})=, or
7) =C-O-C(R^{13})=C(R^{13})-C(R^{13})=;

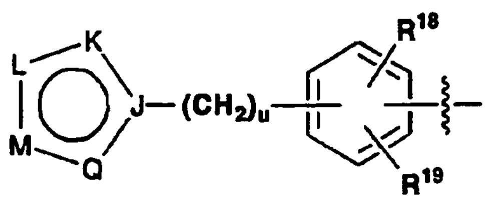
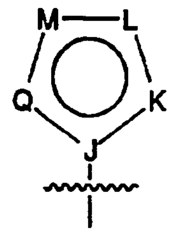
e)



wherein the ring represented by -C-W-R-T-U-V- is a group selected from:

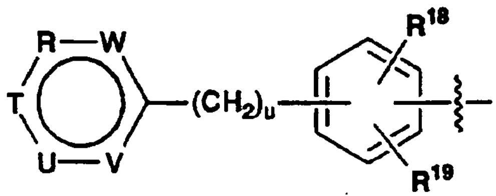
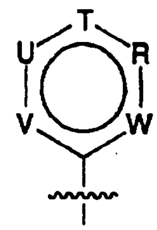
1) -C=N-C(R^{13})=C(R^{13})=C(R^{13})-C(R13)=C(R^{13})-
1) -C=C(R^{13})-N=C(R^{13})-C(R^{13})=C(R^{13})-,
2) -C=C(R^{13})-C(R^{13})=N-C(R^{13})=C(R^{13})-,
3) -C=C(R^{13})-N=C(R^{13})-N=C(R^{13})-,
4) -C=N-C(R^{13})=C(R^{13})-C(R^{13})=N-, or
5) -C=N-C(R^{13})=N-C(R^{13})=C(R^{13})-;

f)

 wherein 

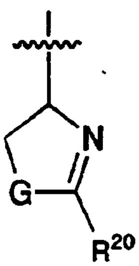
is as defined above;

g)

 wherein 

is as defined above; or

h)

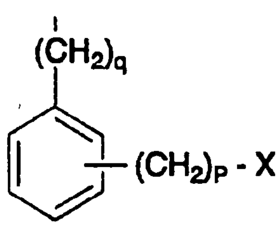


wherein G is S;

R^2 is

a) -(C1-C12 alkyl)-X, or

b)



;

X is

a) halogen (F, Cl, Br, I),

b) -CN,

c) $-NHR^{14}$
d) $-NHC(NH)H$,
e) $-NHC(NH)NHR^{14}$,
f) $-C(NH)NHR^{14}$,
g) $-OR^{14}$, or
h) $-SC(=NH)NHR^{14}$;

R^{11} is H;

R^{13} is

H, halogen (F, Cl, Br, I), $-(CH_2)_wNO_2$, $(C_1$-$C_6)$alkyl, $-(CH_2)_r$-D, $-(CH_2)_w$-OR^8, $-(CH_2)_wCONR^8R^9$, $-(CH_2)wCN$, $-(CH_2)wNC$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCO_2R^3$, $-(CH_2)_wNR^8R^3$, $-(CH_2)_wS(O)_2R^7$, -(CH2wSO2NHCO-(C1-C6)-alkyl, -(CH2)wNHSO2-phenyl $-(CH_2)_wSO_2NH$-$(C_1$-$C_5)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH$-CO_2-$(C_1$-$C_6)$-alkyl, $-(CH_2)_wNHSO_2$-$(C_1$-$C_6)$-alkyl, $-(CH_2)_wNHSO_2$-$(C_1$-$C_6)$-perfluoroalkyl, $-(CH_2)_wCN_4H$, -O(C=O)-$(C_1$-C_5-alkyl), $-O(CH_2)_tCN$, $-NH(CH_2)_tCN$, $-S(CH_2)_tCN$, $-(CH_2)_wNH$-CO-$(C_1$-C_6-alkyl), $-(CH_2)_wNH$-CO-$(C_1$-C_6-perfluoroalkyl), or $-(CH_2)_u$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18};

R^{14} is -H;

R^{18} and R^{19} are independently

H, halo (F, Cl, Br, I), C_1-C_6-alkyl, $-(CH_2)_w$-OR^8, $-(CH_2)_wCN$, $-(CH_2)_wNC$, $-(CH_2)_wNO_2$, $-(CH_2)_wS(O)_rR^7$, $-(CH_2)_wNR^8R^9$, $-(CH_2)_wCOR^8$, $-(CH_2)_wCO_2R^8$, $-(CH_2)_wCONR^8R^9$, $-(CH_2)_wSO_2NH$-$(C_1$-$C_5)$-alkyl, $-(CH_2)_wSO_2NH_2$, $-(CH_2)_wSO_2NH$-CO-$(C_1$-$C_6)$-alkyl, $-(CH_2)_wSO_2NH$-CO_2-$(C_1$-$C_6)$-alkyl, $-(CH_2)_wNHSO_2$-$(C_1$-$C_6)$-alkyl, $-(CH_2)_wNHSO_2$-$(C_1$-$C_6)$-perfluoroalkyl, $-(CH_2)_wNHSO_2$-phenyl, $-(CH_2)_wNHSO_2$-perfluorophenyl, $-(CH_2)_wCN_4H$, -O(C=O)-$(C_1$-C_5-alkyl), $-O(CH_2)_tCN$, $-NH(CH_2)_tCN$, $-S(CH_2)_tCN$, $-(CH_2)_wNH$-CO-$(C_1$-C_6-alkyl),

-$(CH_2)_w$NH-CO-(C_1-C_6-perfluoroalkyl), -$(CH_2)_w$NH-CO-(C_1-C_6-phenyl), -$(CH_2)_w$NH-CO_2-(C_1-C_6-alkyl), -$(CH_2)_w$NH-CO_2-(C_1-C_6-phenyl), or -O(C=O)phenyl;

R18 and R19 can be taken together to form a methylenedioxy group;

R^{20} is selected from the group consisting of: $(CH_2)_r$-D, or -$(CH_2)_u$phenyl wherein the phenyl contains 0-3 substituents selected from R^{18};

and all other required substituents of formula (I) are defined as in Claim 3.

5. A compound of Claim 4 selected from the group consisting of:

N^1-(4-phenylbenzoyl)-(*R*)-boroarginine, hydrochloride
N^1-(3-phenoxybenzoyl)-(*R*)-boroarginine, hydrochloride
N^1-(1-fluorenonyl)-(*R*)-boroarginine, hydrochloride
N^1-(4-[1-butyl]benzoyl)-(*R*)-boroarginine, hydrochloride
N^1-(2-benzoylbenzoyl)-(*R*)-boroarginine, hydrochloride
N^1-(5-phenyl-2-furoyl)-(*R*)-boroarginine, hydrochloride
N^1-(3-[*N*-benzyloxycarbonyl-*N*-methylamino]-4-[1-butyl]-benzoyl)-(*R*)-boroarginine, hydrochloride
N^1-(2-phenyl-4-isoquinoloyl)-(*R*)-boroarginine, hydrochloride
N^1-(4-cyclohexylbenzoyl)-(*R*)-boroarginine, hydrochloride
N^1-(2-methyl-4-phenylbenzoyl)-(*R*)-boroarginine, hydrochloride
N^1-[4-phenyl-2-nitrobenzoyl]boroArg, (+)-pinanediol ester
N^1-[4-phenyl-2-fluorobenzoyl]boroArg, (+)-pinanediol ester
N^1-[4-phenyl-2-aminobenzoyl]boroArg, (+)-pinanediol ester
N^1-[4-phenyl-2-(methylsulfonamido)benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-phenyl-2-(cyanomethylamino)benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-phenyl-2-(cyanomethyl)benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-phenyl-2-(diethylamino)benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroArg, (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-methyl-benzoyl]boroArg, (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]benzoyl]boroArg-OH

N^1-[4-[2-(n-butoxycarbonylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-[2-(diethylaminosulfonyl)phenyl]-2-methyl-benzoyl]boroArg, (+)pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-fluoro-benzoyl]boroArg, (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-fluoro-benzoyl]boroArg, (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-fluoro-benzoyl]boroArg, (+)-pinanediol ester

N^1-[4-[2-(t-butylaminosulfonyl)phenyl]-2-nitro-benzoyl]boroArg, (+)pinanediol ester

N^1-[4-[2-(aminosulfonyl)phenyl]-2-nitro-benzoyl]boroArg, (+)pinanediol ester

N^1-[4-[2-(methoxycarbonylaminosulfonyl)phenyl]-2-nitro-benzoyl]boroArg, (+)-pinanediol ester

N^1-(3-phenylbenzoyl)boroarg, (+)-pinanediol

N^1-[4-(3-BOCNHphenyl)2-methylbenzoyl]boroarg, (+)-pinanediol

N^1-(5-phenyl-2-furoyl)boroarg, (+)-pinanediol

N^1-(5-phenyl-2-thienyl)boroarg, (+)-pinanediol

N^1-[4-(3-nitrophenyl)benzoyl]boroarg, (+)-pinanediol

N^1-[4-(3-aminophenyl)benzoyl]boroarg, (+)-pinanediol

N^1-(3-phenylbenzoyl)borolys, (+)-pinanediol

N^1-(5-phenyl-2-furoyl)boroarg-OH

N^1-(3-phenylbenzoyl)boroIrg, (+)-pinanediol

(R)-[5-amino-1-[[[5-(phenylmethyl)-1H-1,2,4-triazol-1-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β]]-(1,1-dimethylethyl) [3-[5-[[[4-[(amino-iminomethyl)amino]-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzo-dioxaborol-2-yl)butyl]amino]carbonyl]-2-thienyl]phenyl]carbamate hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-5-(phenyl-methyl)-3-(2H-tetrazol-5-ylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-1-[2-[[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]amino]-2-oxoethyl]-5-(phenylmethyl)-1H-1,2,4-triazole-3-acetic acid hydrochloride 1:1 with [3aS-[2(S*),3aα,4β,6β,7aα]]-1-[2-[[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]amino]-2-oxoethyl]-3-(phenylmethyl)-1H-1,2,4-triazole-5-acetic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-methyl 1-[2-[[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-amino]-2-oxoethyl]-5-(phenylmethyl)-1H-1,2,4-triazole-3-acetate hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-methyl 1-[2-[[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-amino]-2-oxoethyl]-3-

(phenylmethyl)-1H-1,2,4-triazole-5-acetate hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3-phenyl-5-(phenyl-methyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

(R)-[5-amino-1-[[[3-phenyl-5-(phenylmethyl)-1H-1,2,4-triazol-1-yl]acetyl]-amino]pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3-(3-nitro-phenyl)-5-(phenylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[4-[(aminoiminomethyl)-amino]-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)butyl]-3-(3-nitrophenyl)-5-(phenylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3,5-bis(phenyl-methyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[4-[(aminoiminomethyl)-amino]-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)butyl]-3,5-bis(phenylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3-(phenylmethyl)-1H-1,2,4-triazole-1-acetamide

(R)-[5-amino-1-[[[3-(phenylmethyl)-1H-1,2,4-triazol-1-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-

2-yl)pentyl]-5-methyl-3-(phenylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(R*),3aα,4β,6β]]-N-[5-amino-1-(hexahydro-3a,5,5-tri-methyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-5-[(phenyl-methoxy)methyl]-3-(phenylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-5-(cyanomethyl)-3-(phenylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3-(phenylmethyl)-5-propyl-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-5-phenyl-3-(phenylmethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

(R)-[5-amino-1-[[[5-methyl-3-(phenylmethyl)-1H-1,2,4-triazol-1-yl]acetyl]-amino]pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3-phenyl-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-5-methyl-3-phenyl-1H-1,2,4-triazole-1-acetamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-5-(2-phenyl-ethyl)-1H-1,2,4-triazole-1-acetamide

(R)-[5-amino-1-[[[5-(2-phenylethyl)-1H-1,2,4-triazol-1-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3,5-bis(2-phenyl-ethyl)-1H-1,2,4-triazole-1-acetamide hydrochloride

(R)-[5-amino-1-[[[3,5-bis(2-phenylethyl)-1H-1,2,4-triazol-1-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3-(2-phenylethyl)-1H-1,2,4-triazole-1-acetamide

(R)-[5-amino-1-[[[3-(2-phenylethyl)-1H-1,2,4-triazol-1-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-3-(3-phenyl-propyl)-1H-1,2,4-triazole-1-acetamide

(R)-[5-amino-1-[[[5-(3-phenylpropyl)-1H-1,2,4-triazol-1-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

(R)-[5-amino-1-[[[3-(3-phenylpropyl)-1H-1,2,4-triazol-1-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-1,5-bis(phenyl-methyl)-1H-1,2,4-triazole-3-acetamide hydrochloride 2:8 with (R)-[5-amino-1-[[[1,5-bis(phenylmethyl)-1H-1,2,4-triazol-3-yl]acetyl]amino]-pentyl]boronic acid hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-4-methyl-2-phenyl-5-pyrimidinecarboxamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-

2-yl)pentyl]-2,4-diphenyl-5-pyrimidinecarboxamide hydrochloride

[3aS-[2(S*),3aα,4β,6β,7aα]]-N-[4-[(amimoiminomethyl)amino]-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)-butyl]-4-methyl-2-phenyl-5-pyrimidinecarboxamide hydrochloride

[3aS-[2(S*),3α,4β,6β,7aα]]-N-[5-amino-1-(hexahydro-3a,5,5-trimethyl-4,6-methano-1,3,2-benzodioxaborol-2-yl)pentyl]-6-phenyl-3-pyridinecarboxamide hydrochloride

(R)-[5-amino-1-[[(6-phenyl-3-pyridinyl)carbonyl]amino]pentyl]boronic acid dihydrochloride

6. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a therapeutically effective amount of a compound of any one of Claims 1 through 5.

7. A method of treating a physiological disorder in a warm blooded animal catalyzed by trypsin-like enzymes comprising administering to an animal in need of such treatment an effective amount of a compound of any one of Claims 1 through 5.